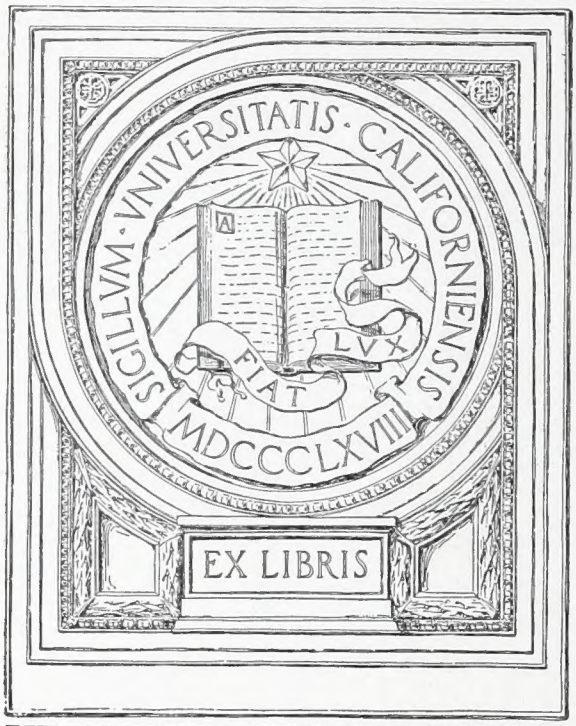
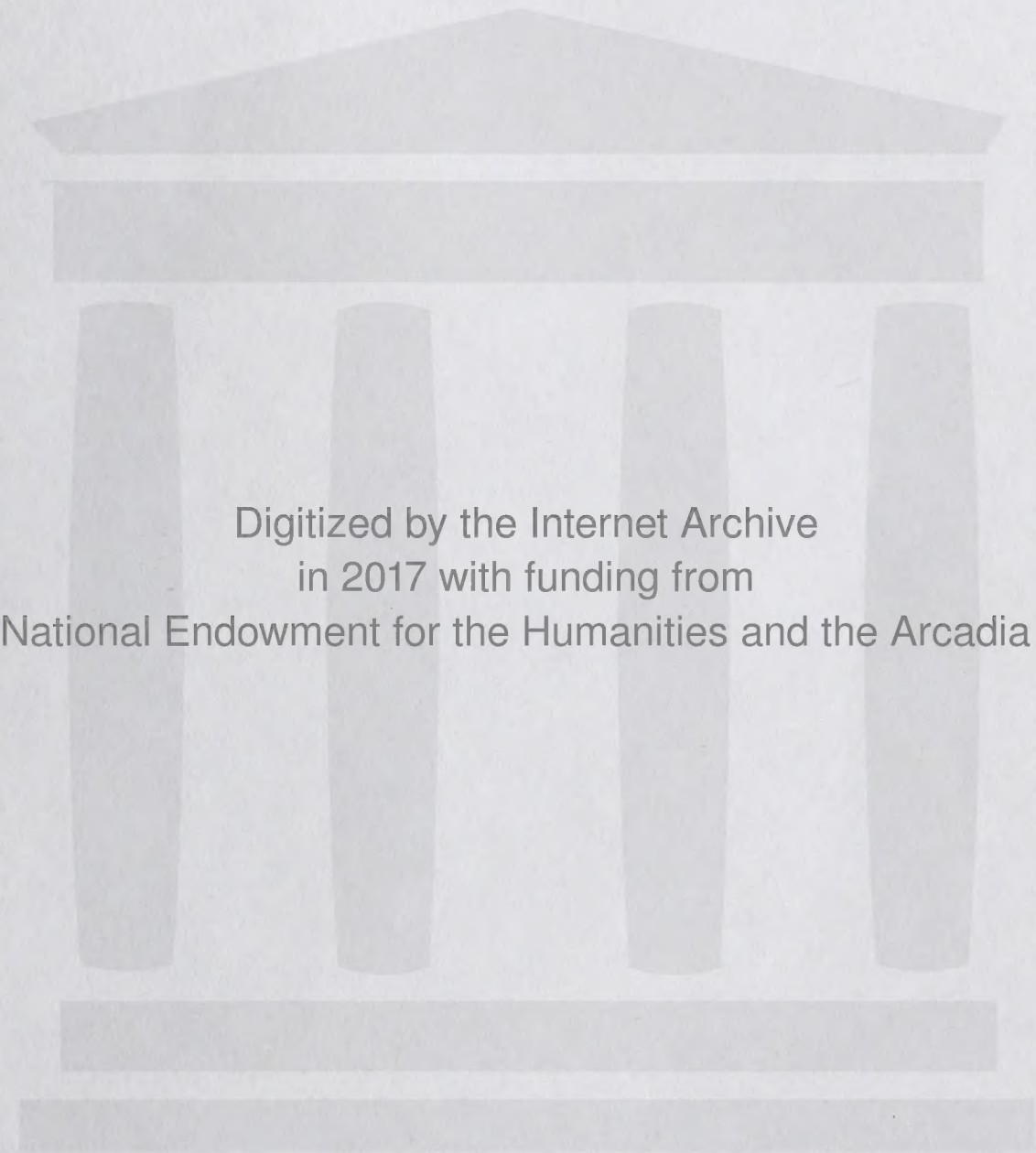
UNIVERSITY OF CALIFORNIA
SAN FRANCISCO MEDICAL CENTER
LIBRARY





Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/hawaiimedicaljou25unse

September-October, 1965

HAWAII MEDICAL JOURNAL

Hawaii Health Fair October 9-10

Honolulu International Center

U.C. MEDICAL CENTER LIBRARY
OCT 14, 1965
San Francisco 22,

Iron deficiency is effectively treated with Zentinic®

ntinic is an oral multifactor hematinic in Pulvule® form. ■ It offers efficient eatment of iron deficiency in patients with menorrhagia, pregnant patients th depleted iron stores, and adolescent patients with erratic eating habits mplicated by the onset of menstruation and rapid growth. ■ The Zentinic rmula contains 100 mg. of elemental iron as ferrous fumarate and 200 mg. vitamin C to aid absorption of the iron by helping to maintain it in the fer- us state. ■ In addition, the B complex vitamins are included for general itritional support.

500232

Zentinic® Lilly

Multifactor Hematinic with Vitamins

In this issue

Death, Disease, and Property Taxes

Corynebacterium Diphtheriae Septicemia

Table of Contents, page 6

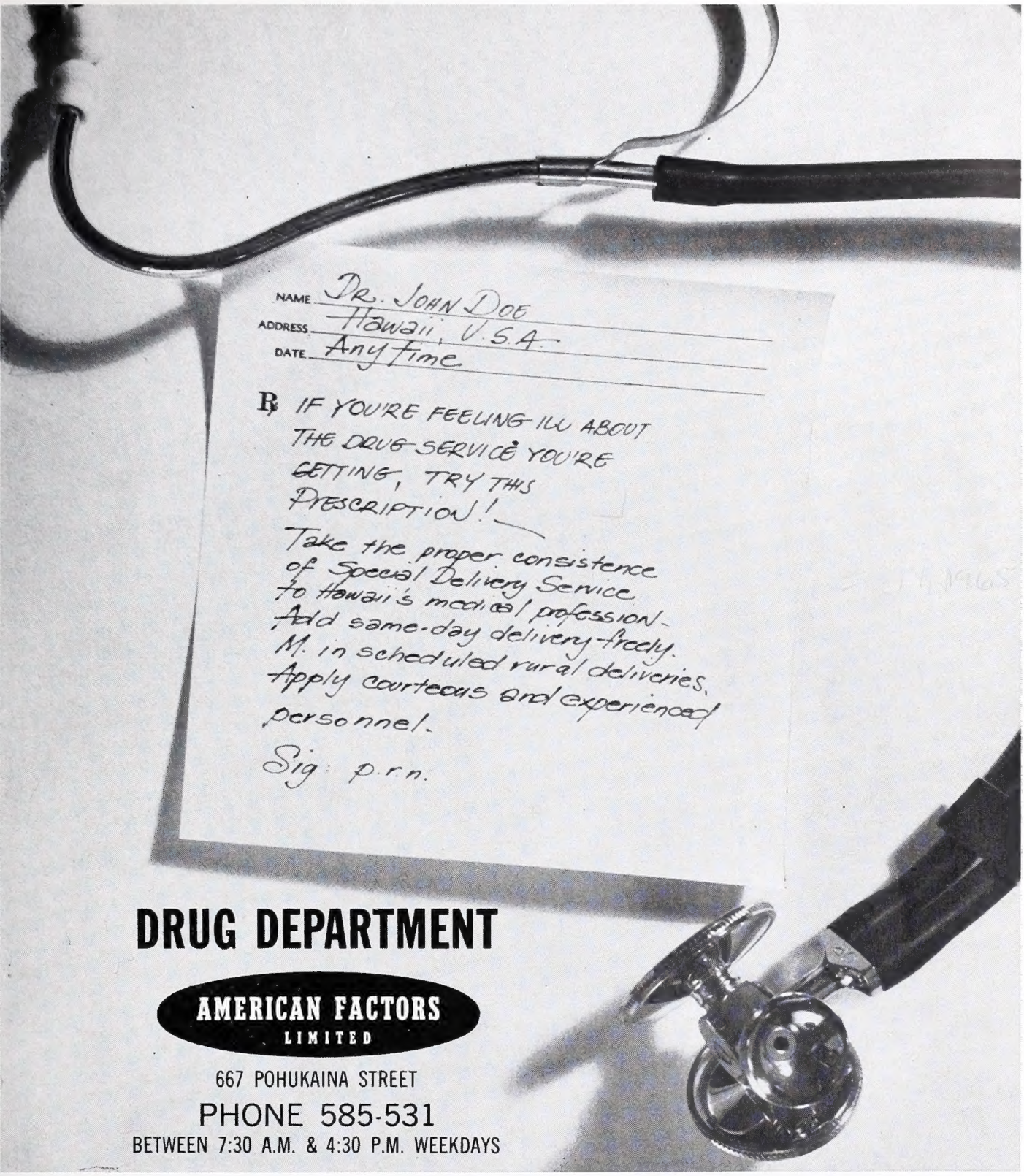
Hawaii Calendar, page 66

Reports & Snorts, page 16

VOLUME 25 • NUMBER 1

204145


an important contribution to the practice of medicine
CHLOROMYCETIN®
(CHLORAMPHENICOL)
PARKE-DAVIS
PARKE, DAVIS & COMPANY, Detroit, Michigan 48232
Complete information for usage available to physicians upon request.
79865



DRUG DEPARTMENT

AMERICAN FACTORS
LIMITED

667 POHUKAINA STREET

PHONE 585-531

BETWEEN 7:30 A.M. & 4:30 P.M. WEEKDAYS

DISTRIBUTORS OF:

Alcon Laboratories
Allergan Pharmaceutical
Astra Pharm. Products, Inc.
Ayerst Laboratories
Barnes-Hind Laboratories
Becton-Dickinson & Company
Beutlich, Inc.
Bristol Laboratories, Inc.
Brockway Glass Company
Burroughs Wellcome & Co.
Ciba Pharmaceutical, Inc.
Davis & Geck Sutures
Drug Package Inc.
Eaton Laboratories
Endo Laboratories
Ethicon Inc.
Hynson, Westcott, Dunning
Johnson & Johnson
Kirkman Pharmacal Co.
Lederle Laboratories
Mead-Johnson & Company
Menley & James Laboratories
Merrell, William S.
Minnesota Mining
Organon, Inc.
Ortho Pharmaceutical Corp.
Pacific Paper Products
Pfizer Laboratories
Ray-O-Vac Company
Riker Laboratory Products, Inc.
A. H. Robins Co., Inc.
Roche Laboratories
J. B. Roerig & Company
Sauter Laboratories
Schering Corp.
The Scholl Mfg. Co., Inc.
G. D. Searle & Co.
Smith, Kline & French Lab.
Stanlabs, Inc.
Tampax Inc.
Tidi Products
Vestal Laboratories
Warner-Chilcott Lab.
Warren-Teed Pharmaceuticals
Westwood Pharmaceuticals
Winthrop Products, Inc.

- **APPLICATORS**
- **DESENEX**
- **DRUG ENVELOPES**
- **ETHER**
- **LYSOL**
- **MAZON**
- **OINTMENT TINS**
- **OSYL**
- **Rx BOTTLES**
- **Rx FILES**
- **PILL BOXES**
- **TONGUE BLADES**
- **X-RAY FILMS AND SUPPLIES**

HAWAII MEDICAL JOURNAL

Published Bi-Monthly by the HAWAII MEDICAL ASSOCIATION (Incorporated in 1856 under the Monarchy), 510 S. Beretania St., Honolulu, Hawaii 96813 • *Editor,* HARRY L. ARNOLD, JR., M.D. • *Assistant Editor,* DORIS R. JASINSKI, M.D. • *News Editor,* HENRY N. YOKOYAMA, M.D. • *Managing Editor,* LEE MCCASLIN

VOLUME 25, NUMBER 1 • SEPTEMBER-OCTOBER, 1965 • $6.00 A YEAR, $1.00 A COPY

The Hawaii Medical Association

Officers 1964-1965

President • O. D. PINKERTON, *Honolulu*
President-Elect • THEODORE T. TOMITA, *Honolulu*
Past President • SAMUEL D. ALLISON, *Honolulu*
Secretary • RANDAL A. NISHIJIMA, *Honolulu*
Treasurer • HERBERT Y. H. CHINN, *Honolulu*

County Presidents

Hawaii County • RAYMOND T. EKLUND, *Kamuela*
Honolulu County • ROBERT T. WONG, *Honolulu*
Kauai County • WEBSTER BOYDEN, *Lihue*
Maui County • MARION HANLON, *Wailuku*

Delegate to A.M.A. • RICHARD D. MOORE, *Honolulu*
Alt. Delegate to A.M.A. • GEORGE H. MILLS, *Honolulu*

Councillors 1964-1965

Maui • JOSEPH E. ANDREWS
Honolulu • GEORGE H. BATTEN
Honolulu • BERNARD W. D. FONG
Honolulu • ANDREW C. IVY, JR.
Hawaii • ROBERT M. MIYAMOTO
Kauai • BURT O. WADE

Officers — County Societies — 1965

HAWAII		HONOLULU
RAYMOND T. EKLUND •	President	• ROBERT T. WONG
ED B. HELMS •	Vice President	• JOHN J. LOWREY
ETTA WRIGHT BEST •	Secretary	• GEORGE H. MILLS
PAUL J. CALDWELL •	Treasurer	• RICHARD E. ANDO
KAUAI		**MAUI**
WEBSTER BOYDEN •	President	• MARION HANLON
Y. MIYASHIRO •	Vice President	• KENNETH A. HALING
ROBERT J. EMRICK •	(Treasurer) (Secretary)	• BILLIE FERN STROTHER

The JOURNAL may not be held responsible for opinions expressed in papers, discussions, communications, or advertisements. The advertising policy of the HAWAII MEDICAL JOURNAL is governed by the rules of the Council on Drugs of the American Medical Association. The right is reserved to reject material submitted for editorial or advertising columns. All material for publication must be in the hands of the editor on or before the 10th day of the month preceding publication date. Reprints of original articles will be supplied at actual cost, provided request is attached to manuscript or made in sufficient time before publication. A reasonable number of cuts and illustrations accompanying an article will be accepted for printing. The right is reserved to ask the author to bear cost of these when it is found necessary to do so.

Copyright, 1965, by the Hawaii Medical Association, Honolulu, Hawaii. Entered as second class matter, October 17, 1941, at the Post Office in Honolulu, Hawaii, under the Act of August 24, 1912. Office of Publication: Mabel L. Smyth Memorial Building, 510 S. Beretania St., Honolulu, Hawaii 96813.

Carnation
EVAPORATED MILK



1964
Carnation Healthy Baby Contest
$1,000 1st prize winner,
Richard Penron Rasa
of Honolulu, Hawaii

HAWAII'S HEALTHY BABY MILK...

1st CHOICE FOR INFANT FEEDING...
No. 1 in the Islands for generations,
...available everywhere in Hawaii



"from Contented Cows"

HAWAII MEDICAL JOURNAL

Contents

Volume 25, Number 1, September-October, 1965

Articles

Selective Vagotomy, Antrectomy, and Gastroduodenostomy for Duodenal Ulcer 25
Kazushi Tanaka, M.D.

Corynebacterium Diphtheriae Septicemia: Case Report of Successful Treatment 31
Capt. Lawrence H. Gottlieb, MC, USA, and Maj. Benjamin J. Veltri, MSC, USA

Death, Disease, and Property Taxes 34
Robert C. Schmitt, M.A.

Collection and Utilization of Vital and Health Statistics in Hawaii 36
Richard K. C. Lee, M.D., and Charles G. Bennett, B.S., M.A.

Editorials

The Medical School is Coming 42

Town and Gown: A Partnership 43

Features

Book Reviews 54

Bureau of Medical Economics 48

County Society News 51

Hawaii Academy of General Practice 47

Hawaii Calendar 66

Hawaii Health Fair Participants 51

In Memoriam—Doctors of Hawaii—LVII 46

Maternal Death Study 49

New Members 50

Notes and News 52

President's Page 41

Reports and Snorts 16

This Is What's New! 45

Hawaii Technologists' Bulletin

Report on the 1965 ASMT Convention 58

HSMT Notes and News 59

utazolidin®
and of
enylbutazone

steoarthritis

ieigy



rapeutic effects
umber of investigators report improve-
nt in about 75% of cases. Relief of pain
stiffness is the predominant response.
quently, there is also a significant
rovement in function. The beneficial
cts of the drug are usually seen by the
d or fourth day of treatment.

re is general agreement that milder
es of osteoarthritis are preferably
ted by simple analgesics. In many
ients, however, this mode of therapy
s to give sufficient relief. Because ster-
s are not very effective in this form of
ritis, phenylbutazone affords the drug
rapy most capable of relieving the more
ere cases. For best results, it is recom-
nded that treatment with phenylbutazone
combined with physiotherapy and other
propriate supportive measures.

sage
initial daily dosage in adults is 300-600
. in divided daily doses. In most instances,
mg. daily is sufficient for maximum
rapeutic response. A trial period of one
ek is adequate to determine the effects
he drug; if there is no improvement,
continue the drug. When improvement
es occur, dosage should be promptly
creased to the minimum effective level:
s should not exceed 400 mg. daily, and is
en achieved with only 100-200 mg. daily.

cautions
fore prescribing, the physician should
tain a detailed history and perform a
mplete physical and laboratory examina-
n, including a blood count. The patient
uld be kept under close supervision and
should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning: If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Side effects
The most common side effects are nausea, edema and drug rash. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Contraindications
These include: edema, hypertension, or danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should not be given when the patient cannot be seen regularly, when the patient is senile, or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin® alka are contraindicated in patients with glaucoma.

Note: The physician should be fully aware of dosage, precautions, side effects and contraindications as contained in the complete prescribing information.

Butazolidin alka

Each capsule contains:	
Butazolidin, brand of phenylbutazone	100 mg.
dried aluminum hydroxide gel	100 mg.
magnesium trisilicate	150 mg.
homatropine methylbromide	1.25 mg.

Butazolidin
brand of phenylbutazone
Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York
BU-3143

Now...even more compact and lower in cost



KODAK X-OMAT Processor, Model M5

Its size, its price, its performance reliability make it ideal

1. For single-unit installation in the smaller departments in hospitals; also in private offices and clinics where full- or part-time diagnostic service is provided.

2. For multiple-unit installations in the larger x-ray depts.

3. For supplementary installations in the central x-ray department such as "special procedures" rooms, gastrointestinal suites, etc.

4. For installations serving emergency, surgery, neurology, orthopedics, etc.

SIZE: The new Model M5 needs only 15 inches inside the darkroom—for the film-feeding station. (KODAK X-OMAT Film Feeder, Model 4—new in design—will be available as an accessory.)

Outside the darkroom it needs only 22½ inches of floor area 30 inches wide—less than 5 square feet.

CAPACITY: 70 sheets of film per hour, average of intermixed sheet-film sizes.

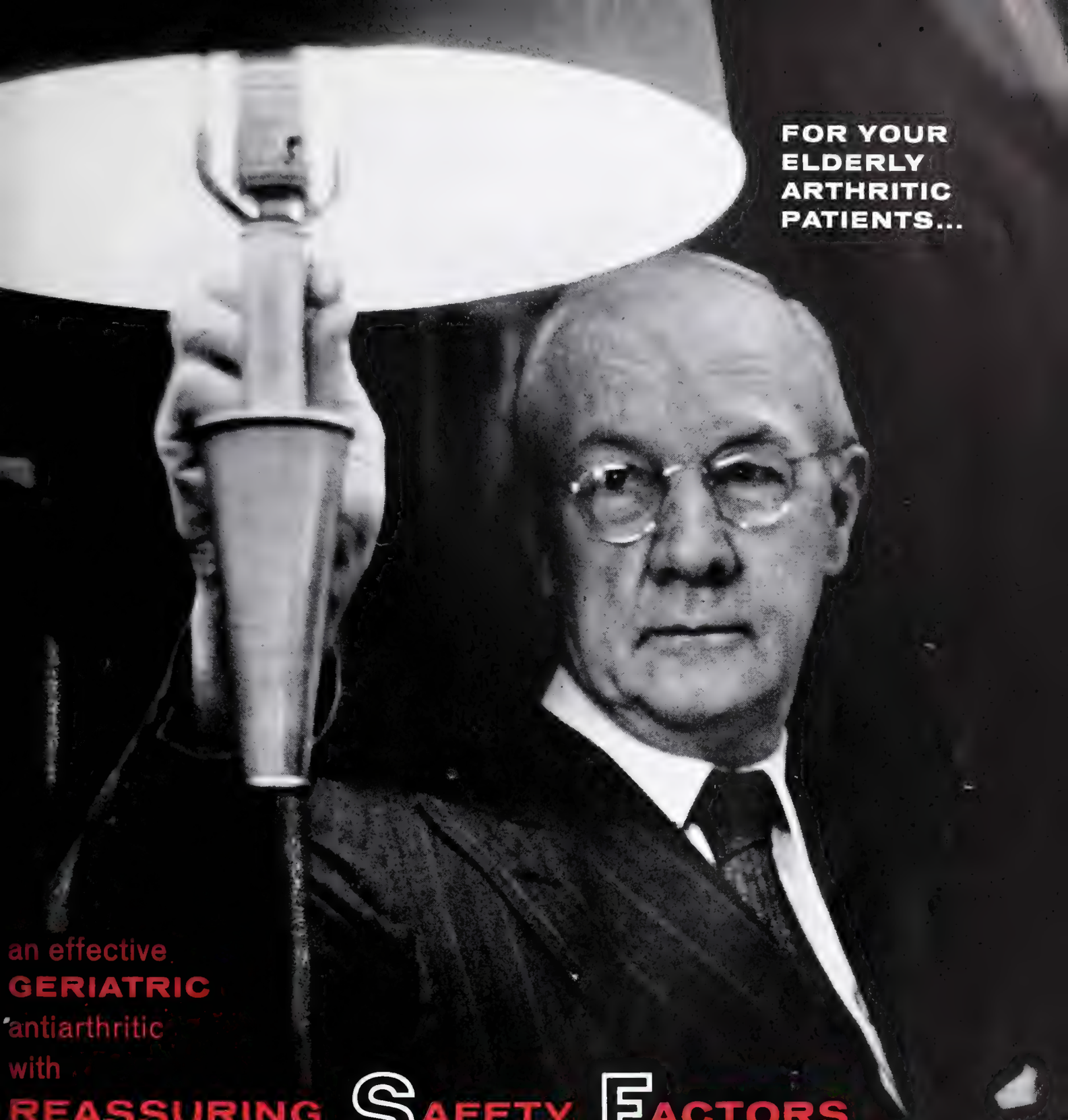
Processing cycle—dry to dry—8 minutes for an average-size film. Put-through rate, 10 inches per minute.

RELIABILITY: The new Model M5 uses the same time-tested mechanical principles and processing chemistry as other members of the KODAK X-OMAT Processor family. These, in combination with KODAK ROYAL BLUE and KODAK BLUE BRAND Medical X-ray Film, produce the superior radiographic quality that radiologists the world over have come to expect ever since the introduction of the KODAK X-OMAT Processing System seven years ago.

Note: KODAK X-OMAT Processors, Models M3 and M4A, are also available for installations requiring their greater processing capacity.

For further information, consult your KODAK X-OMAT Processor dealer, or write

Eastman Kodak Company
X-Omat Center, Rochester, N.Y. 14650



FOR YOUR ELDERLY ARTHRITIC PATIENTS...

an effective **GERIATRIC** antiarthritic with

REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention... the enteric coating assures gastric tolerance... and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

Pabalate-SF

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

—the new, convenient way to prescribe
PABALATE-SODIUM FREE

MEDICAL PLACEMENT BUREAU
and
NURSES' REGISTRY

24 Hour Service

LET US SERVE YOU IN YOUR NEED

Nurses, Staff and Office
Nurses, Private Duty
Nurses, Supervisors
Practical Nurses
Nurses, Aide
Dental Assistants
Physical Therapists
X-Ray Technicians
Laboratory Technicians
Medical Stenographers
Medical Clerks
Receptionists
Male Nurses
Bookkeepers
Home Companions

Frieda M. Beezley, R.N., *Director*
Patsy Harrison, *Secretary*

1473 South King St. **991-237**

CUTEST UNIFORMS

Where Fashion is Foremost with Women in White

GOOD SERVICE IS UNIFORM WITH US

★

Our New Location is at

1969 S. KING ST. • PHONE 964-886

New Proprietor

Mr. Arthur M. H. Chung

★

We Carry All Name Brand Uniforms and Also Doctors' Jackets and Smocks

★

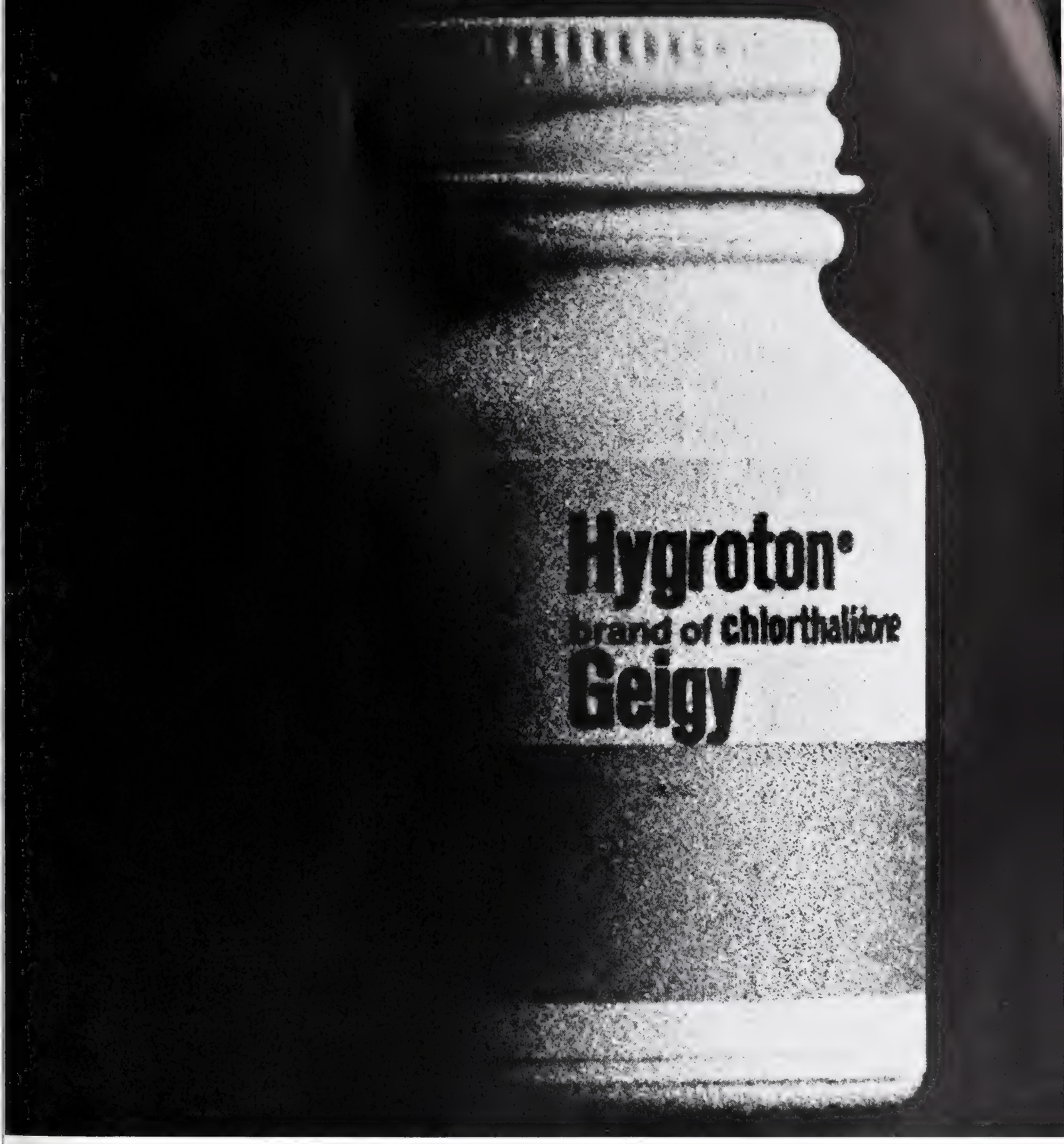
We Specialize in Custom Made Uniforms

Indications: Many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.
Side Effects: Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.
Average Dosage: One tablet (100 mg.) daily with breakfast.
Availability: Tablets of 100 mg. in bottles of 100 and 1000.
For full details, see the complete prescribing information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York
HY-3417

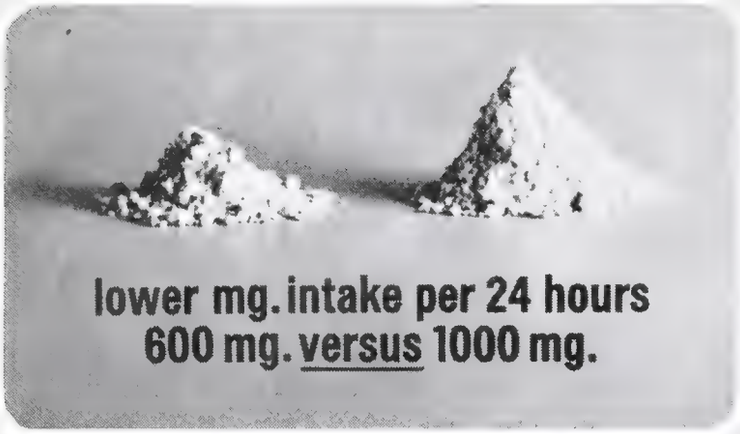
Hygroton®
brand of chlorthalidone

The long-acting diuretic

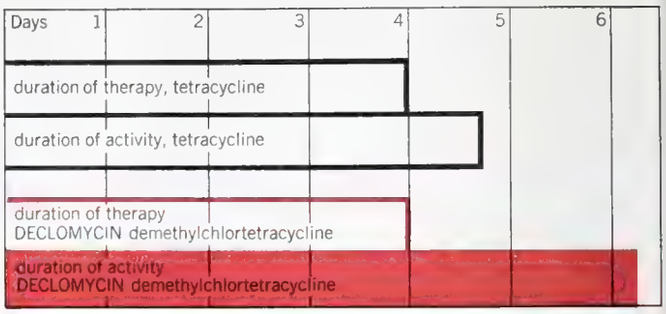


who needs it?

Patients with edema.
Edema in congestive heart failure.
Or in the premenstrual syndrome.
Edema in pregnancy...or obesity.
Patients you want to bring to dry weight.
And those you want to keep at dry weight.
Those you want on single daily doses.
And those requiring even fewer doses.
Those resistant to other therapy.
And those intolerant of other diuretics.
Those who have to pinch pennies.
And those who can afford the best.

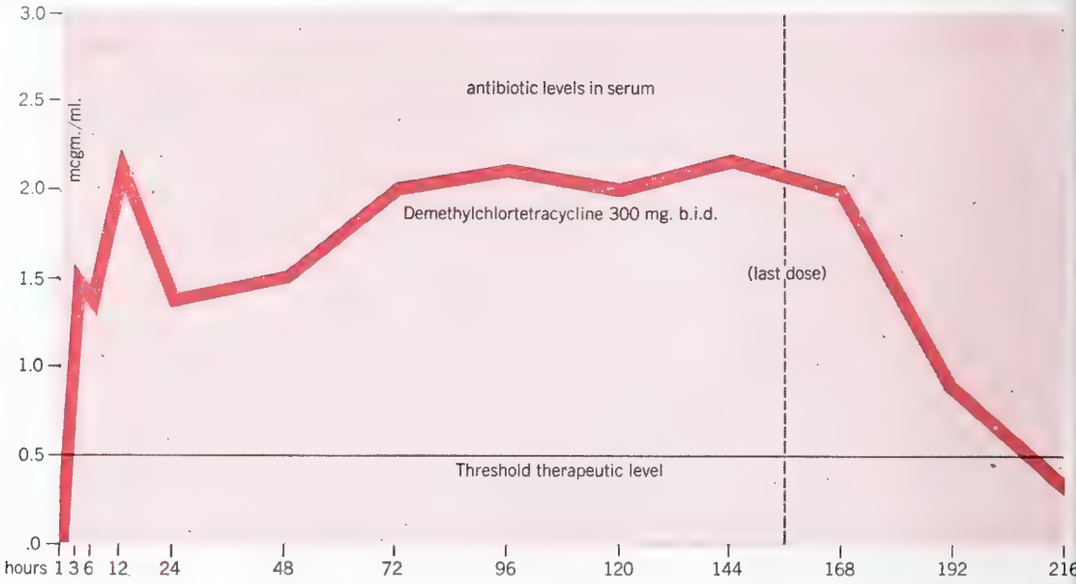


lower mg. intake per 24 hours
600 mg. versus 1000 mg.

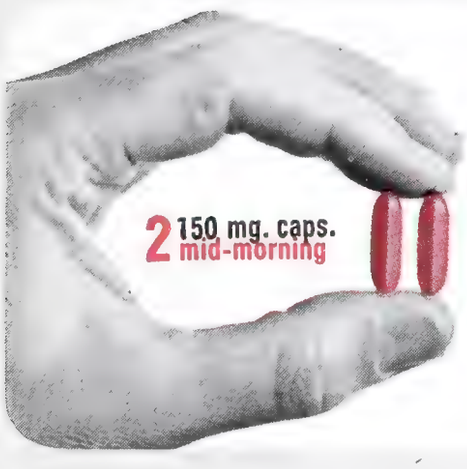


1-2 days'"extra"activity

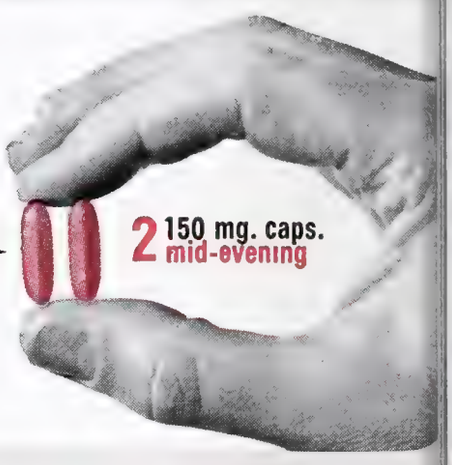
higher activity levels than other tetracyclines—with less peak-and-valley fluctuation



From Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.; Amer. J. Med. Sci. 243:296 (Mar.) 1962



12 hours between doses



the option of b.i.d. dosage

the"extra"benefits raise the level of antibiotic control

DECLOMYCIN
DEMETHYLCHLORTETRACYCLINE
150 mg. CAPSULES

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

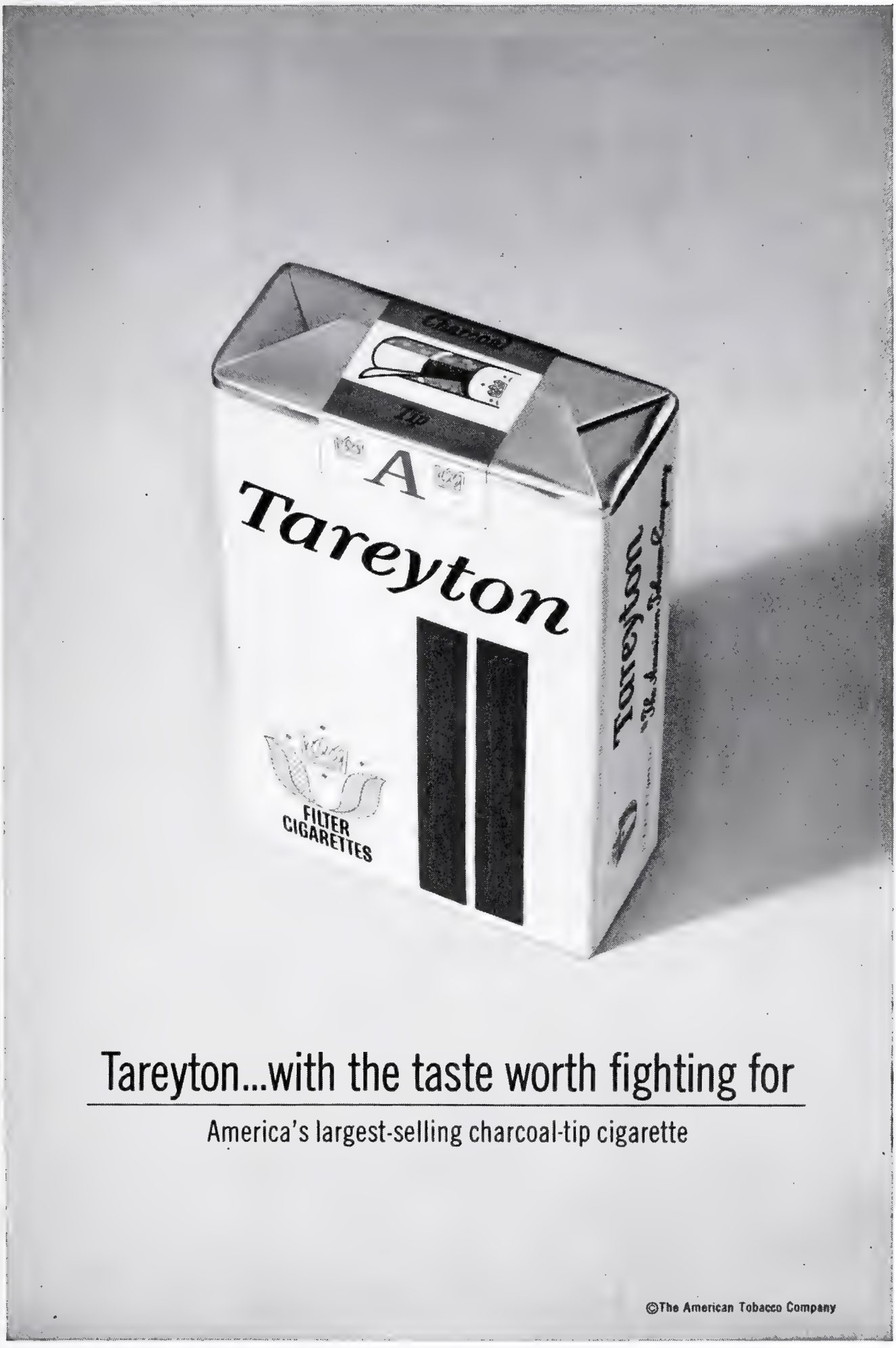
Side effects typical of tetracyclines include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation) and increased intracranial pressure (in young infants). Also, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. Because of reactions to artificial o natural sunlight (even from short exposure and at low dosage) patient should be warned to avoid direct exposure. Stop dru immediately at the first sign of adverse reaction. It should not b taken with high calcium drugs or food; and should not be take less than one hour before, or two hours after meals.

Capsules, 150 mg. and 75 mg. of demethylchlortetracycline HCl
Average Adult Daily Dosage: 150 mg. q.i.d. or 300 mg. b.i.d.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

8035-9720


Tareyton
FILTER
CIGARETTES
Tareyton
Tip
A
Tareyton...with the taste worth fighting for
America's largest-selling charcoal-tip cigarette
©The American Tobacco Company

THREE TIMES A YEAR

Your patients without a plan to economically protect them when they are in need of medical assistance may join Hawaii's own community service medical plan on an individual basis three times a year.

Membership is open to qualified individuals of all ages in
MARCH — JULY — *and* — NOVEMBER

HMSA is a non-profit, community service organization. As such it is able to provide tremendous benefits for reasonably low dues.

HMSA is the medical plan which gives you free choice of doctors and hospitals — an extremely desirable feature.

Member of Western Conference of Prepaid Medical Service Plans



® BLUE SHIELD PLAN FOR HAWAII

HAWAII MEDICAL SERVICE ASSOCIATION

For 25 Years – Hawaii's Own / Hawaii Owned



Investment opportunity of special interest to doctors

GREENTREE ESTATES

Beautiful, fee simple land priced from 25¢ a square foot on Oahu. What will it sell for in 1970?

● **LOCATION:** One acre and larger lots located at Pupukea . . . an hour from Honolulu . . . in cool elevation 400 to 600 feet above sea level. Sunset Beach at your doorstep. ● **IT IS READY FOR OCCUPANCY.** Wide paved streets. City water. Electricity. Gas. Telephone. ● **IT IS UNDERPRICED.** Fee simple land starts at 25¢ a square foot. 10% down . . . and 20 years to pay. ● **SUGGESTION:** Look at the property in the surrounding area and what it is selling for. Look at the improved highways planned in this direction. Look at the growth of housing in this direction. Inspect the property. The gorgeous views, the lush land, the many nearby activities.



Call Frank Yamamoto, Broker, for a personally conducted tour available to members of the medical profession. Phone 503-310. Home 746-005.

PUPUKEA REALTY

TELEPHONE: 503-310 OR 638-455 OR CALL ANY REAL ESTATE BROKER

HAWAII MEDICAL JOURNAL

Reports & Snorts

Lionel Reese, at the University of West Ontario, reports that Winthrop's NegGram cured gram-negative urinary tract infections in 57 of 61 patients. A second and resistant organism emerged in 15. In six patients, either GI or skin reactions required the treatment to be stopped, but not before the infection had been eradicated.

• • •

Patient coughing? Robins' Robitussin-DM contains glyceryl guaiacolate and dextromethorphan hydrobromide in cherry-vanilla syrup.

• • •

J. Sklar's new Holcombe gastric tourniquet clamp (Long Island City, N. Y. 11101) looks interesting. No handles.

• • •

A simple agglutination slide test for pregnancy is available in 25-test kits from Hyland Laboratories, c/o Baxter Laboratories, Morton Grove, Illinois. They don't know their ZIP Code yet.

• • •

The skin of one tiny Colombian kokoi frog furnishes enough poison to arm 50 arrowheads. The venom is ten times as deadly, weight for weight, as that of the balloon fish. It causes paralysis in one minute and respiratory death in about eight minutes.

• • •

Feinman and Sherman of Brooklyn report that Winthrop's Alvodine (piminodine) is a highly effective dental analgesic, as measured by double blind studies against a placebo.

• • •

No longer may peanut butter contain as little as 78 per cent peanuts. The new minimum is 90 per cent, says the FDA, as of September 6—unless prior objections at hearings delay the effective date.

• • •

"Green on cheerful yellow" is the color scheme of printed weight-record charts designed for sticking in a handy place around the house, for persons with a weight problem. The range is 38 pounds, and four months. A dollar sent to Scott Corporation, 1410 N.E. Marine Drive, Portland, Oregon, will bring you "charts"—it doesn't say how many.

"Flammable Anesthetics" is out in a new 1965 edition, which doesn't seem to call for any dignation, nor to spire any teresting comments. You can write to the N.F.P.A. at 60 Battermarch St., Boston, Mass. 02110, sending 65 cents.

• • •

Tetanus antitoxin, that notorious producer of serum sickness, can now be bypassed by giving homologous human antitetanus gamma globulin. Flint Laboratories (a Baxter division) calls it HU-TET™, and markets it in 250-unit vials, a single average adult dose. Some children are still neglected enough, and some adults stupid enough, not to have taken tetanus toxoid.

• • •

Bard Parker will sell you a complete four-piece disposable 1900-cc enema set.

• • •

T. H. White says in his American diary that he was told Keats should be read aloud in a Cockney accent. Don't knock it if you haven't tried it!

• • •

Wampole Laboratories' UCG test for chorionic gonadotropin can now be applied to serum, as well as to urine, with greater reliability and no need for pooling samples for 24 hours, in order to detect early pregnancy. The new test units are unchanged except for instructions for applying the test to serum.

• • •

National Instrument Company announces a desktop thermoelectric cooling device which operates the cold plate of a freezing microtome at any desired temperature down to –35° C., and switches from freezing to thawing by the flick of a switch, in seconds—without any bulky carbon dioxide tanks. The address is 4119 Fordleigh Road, Baltimore 15, Maryland.

• • •

You too can have an electric wastebasket which will make coarse excelsior of all your waste paper in seconds. Clips and staples are devoured in stride. Great for kindling, and for safeguarding state secrets. Morris Golde at 145 West 45th Street, New York 10036, will take care of your needs. ■



ping better, Mrs. Smith?



My, yes! I'm not tired out anymore.



Headaches still bother you?



at all. I feel wonderful!



Mmm. Normal. Must be taking your Regroton.



One a day at breakfast. Sure is easy on me.



. I'm cutting you down to a tablet daily.



Thanks for everything, Doctor. See you on the 3rd.



...excellent response to Regroton, from 196/120 to 145/90.

position: Each tablet contains chlorthalidone, g., and reserpine, 0.25 mg.
raindications: History of mental depression, rsensitivity, and most cases of severe renal epatic diseases.
ning: Discontinue 2 weeks before general thesia, 1 week before electroshock therapy, if depression or peptic ulcer occurs.
autions: Reduce dosage of concomitant anti-rtensive agents by one-half. Discontinue if BUN rises or liver dysfunction is aggravated. trolyte imbalance and potassium depletion occur; take particular care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use with caution in patients with ulcerative colitis, gallstones, or bronchial asthma.
Side Effects: Nausea, vomiting, diarrhea, muscle cramps, headaches and dizziness. Potential side effects include angina pectoris, anxiety, depression, drowsiness, hyperglycemia, hyperuricemia, lassitude, leukopenia, nasal stuffiness, nightmare, purpura, urticaria, and weakness.
For full details, see the complete prescribing information.

Availability: Bottles of 100 and 1000 tablets.
Average Dosage: One tablet daily with breakfast.

*Chupkovich, V.; Finnerty, F. A., Jr., and Kakaviatos, N.: The value of chlorthalidone plus reserpine in moderately severe and severe hypertension: A two year study. Presented at the 7th Inter-American Congress of Cardiology, Montreal, June 14–19, 1964.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York
RE-3269

Regroton®

Superior to other antihypertensives in 76 of 80 patients during a 2-year study*

Geigy



The Pain Is Gone

Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

Hawaii's most modern and fully staffed convalescent hospital

"Work of Healing"

KAHANAOLA

Next door to POHAI NANI, Hawaii's most beautiful retirement home. Owned and operated by Pacific Homes Corp.
Expert 24-hour care, supervised by experienced registered nurses. Meal and individual dietary needs under the supervision of a trained dietitian.

KAHANAOLA features

Private and semi-private rooms; 42 beds.
Occupational and physical therapy.
Piped-in oxygen to each bed.
Private 2-way intercom to nurses' station.
Recreation lounge with TV.
Trained beauticians available.

ENDORSED by

American Hospital Assoc.
Hawaii State Nursing Home Assoc.
Hospital Assoc. of Hawaii.
American Nursing Home Assoc.
HMSA approved.

For information, write:

Administrator
Kahanaola Convalescent Hospital
45-090 Namoku St.
Kaneohe, Hawaii 96744
Or phone: 241-670—246-211



New classic styling...
new high performance...Buick '65



BUICK RIVIERA FOR 1965

Test-drive it at
SCHUMAN'S
1234 So. Beretania
Phone: 506-211

Itemized patient statements processed and mailed at a regular time, every month.

Collect
95%
of "Your" Accounts Receivable
EVERY MONTH

For complete information on how to increase your cash income, call
567-737 *today.*

Professional Services
1350 S. KING ST.
HONOLULU, HAWAII 96814

...nothing, that is, except the

sedative-antispasmodic action of DONNATAL®

Functional disturbances of gastrointestinal tone and motility present the physician with an all too common reaction to the stressful dilemmas and frustrations of modern living.[3,6]

For their dependable control, no better spasmolytic has ever been discovered than the *natural* belladonna alkaloids in combination with phenobarbital, as in DONNATAL.

Phenobarbital, as a mild sedative, has the benefit of long use and a reassuring record of freedom from unexpected and untoward reactions. In allaying subjective tension, it helps to prevent emotional stimuli from provoking or intensifying visceral spasm.

The *natural* belladonna alkaloids in DONNATAL—conforming to the classic formulation by Vollmer[5]—selectively include only the therapeutically desired alkaloids in precisely and optimally balanced ratio. The clinical uncertainties of the variable tincture and extract of belladonna are thus avoided.

Further, a recent pharmacological study has confirmed that the antispasmodic effectiveness of the belladonna alkaloids in DONNATAL is measurably potentiated by the presence of phenobarbital [8]

Over the years, the professional consensus has reflected broad clinical confidence in the marked benefits to be achieved by DONNATAL in a wide range of visceral disorders... in peptic ulcer,[1,6] functional bowel distress,[1] gastrointestinal spasm and discomfort,[2] and other functional disturbances of visceral smooth muscle.

CONTRAINDICATIONS: Glaucoma, advanced renal or hepatic disease or hypersensitivity to any of the ingredients.

PRECAUTIONS: Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction as in prostatic hypertrophy.

SIDE EFFECTS: Blurring of vision, dry mouth, difficult urination or flushing and dryness of the skin may occur at higher dosage levels, rarely at the usual dose.

*This one at Oak Creek, Castle Rock, Arizona

References: 1. Hock, C. W.: Clin. Med. 8:1932, 1961. 2. Marks, L.: Am. J. Gastroenterol. 27:180, 1957. 3. Palmer, W. L., and Kirsner, J. B.: Therapeutics in Internal Medicine, 2nd ed., F. A. Kyser, Ed., Hoeber, New York, 1953, p. 368. 4. Ryan, J. P., Jenkins, H. J. and Robinson, S. M.: J. Pharmaceut. Sciences 53(9):1084, 1964. 5. Vollmer, H.: Arch. Neurol. & Psychiat. 43:1057, 1940. Abst. J.A.M.A. 115:333, 1940. 6. Wharton, G. K., Balfour, D. C., Jr., and Osman, K. I.: Postgrad Med. 21:406, 1957.

A.H. ROBINS CO., INC., Richmond 20, Va.

Prescribed by more physicians than any other antispasmodic —well over 5 billion doses!

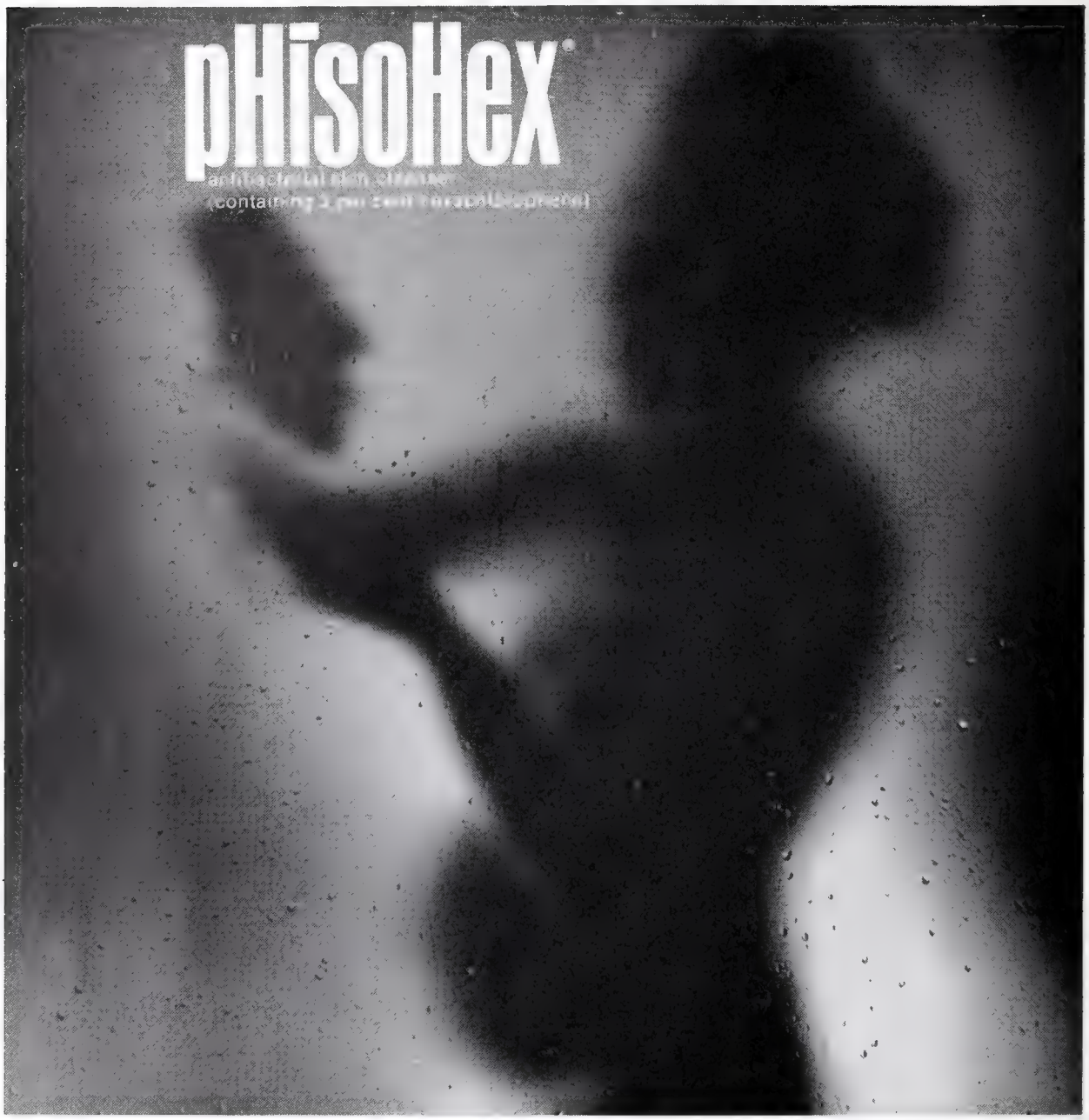
Donnatal®

Robins

In each Tablet, Capsule or 5 cc. Elixir		*In each Extentab®*
0.1037 mg.	hyoscyamine sulfate	0.3111 mg.
0.0194 mg.	atropine sulfate	0.0582 mg.
0.0065 mg.	hyoscine hydrobromide	0.0195 mg.
16.2 mg. (¼ gr.)	phenobarbital (¾ gr.)	48.6 mg.

(Warning: May be habit forming.)

Antepartum precaution gives Postpartum protection



A simple antiseptic measure antepartum can help assure an infection-free delivery and postpartum. During the last trimester of pregnancy and certainly during the ninth month, have your patients wash and bathe regularly with pHisoHex—paying special attention to the perineum, the lower abdomen and thighs.

pHisoHex, antibacterial detergent, contains 3 per cent hexachlorophene. It deposits this powerful bacteriostatic agent "...as a semi-permanent film on the skin of frequent users."[1] The film acts as an antibacterial "...curtain between the reservoirs of bacteria in the deeper layers of the skin and environmental replenishment."[2] Thus, a surgically clean field for delivery is made more certain. The danger of "staph," "strep" and other postpartum infections is greatly lessened.

pHisoHex, trademark reg. U. S. Pat. Off.

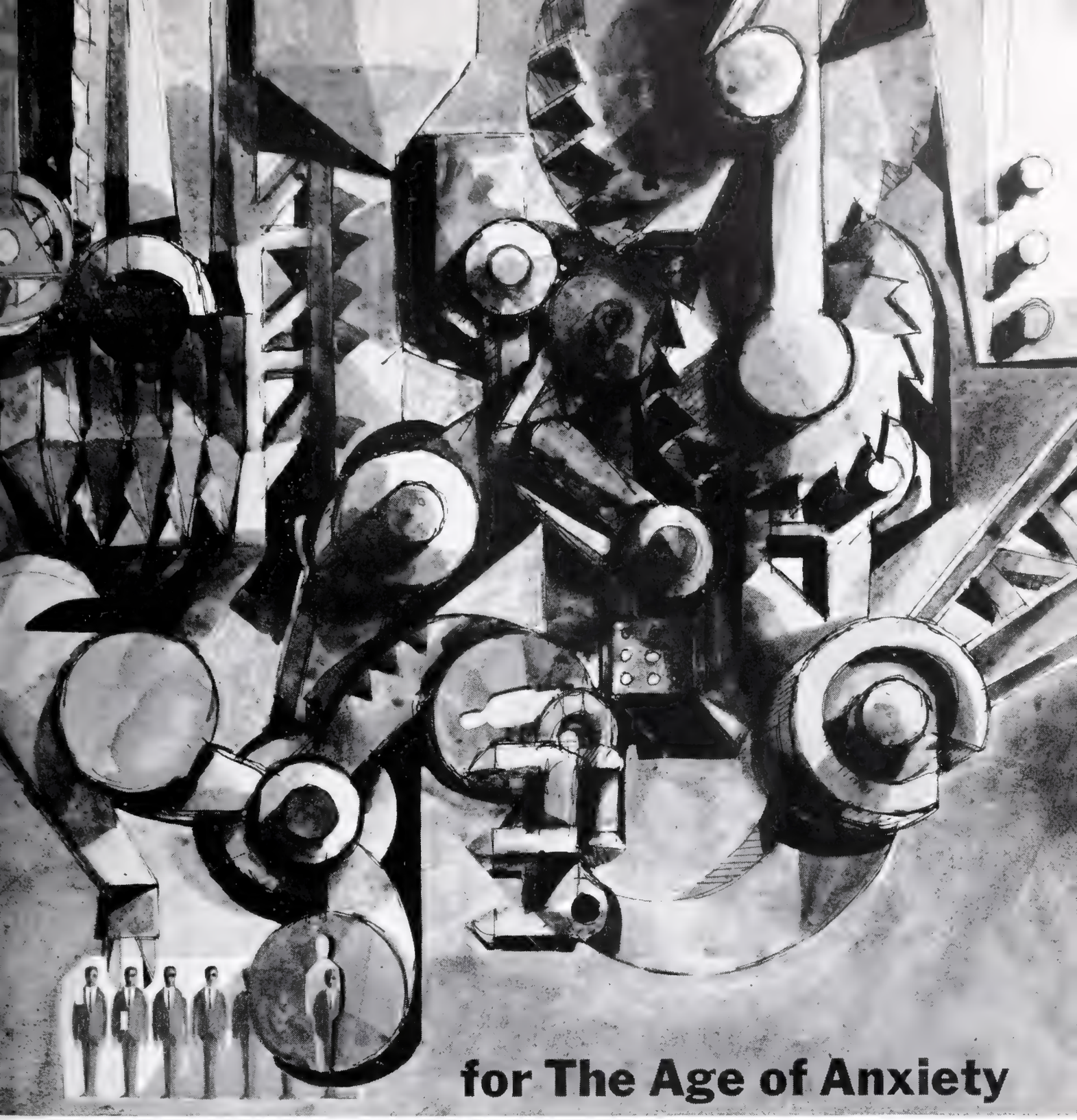
pHisoHex is also useful for vaginal examinations during labor[3] and for perineal preparation and surgical scrub.[4] During the nursing months, pHisoHex baths can help guard mothers against furunculosis and breast abscess, while protecting infants against infection.

pHisoHex is nonalkaline, nonirritating and hypoallergenic. **It is available in unbreakable plastic squeeze bottles of 5 oz. and 16 oz., and in plastic bottles of 1 gal.**

References: 1. Smylie, H. G.; Webster, C. U., and Bruce, M. L.: *Brit. M. J.* 2:606, Oct. 3, 1959. **2.** Smylie, H. G., and Webster, C. U.: *Brit. M. J.* 1:201, Jan. 16, 1960. (Correspondence) **3.** Ostlund, J. A.: *Am. J. Obst. & Gynec.* 83:1099, April 15, 1962. **4.** Reid, D. E.; Walter, C. W., and Buck, Ann S.: *Surg. Gynec. & Obst.* 91:537, Nov., 1950.

Winthrop Laboratories
New York, N. Y.

Winthrop



For those who cannot cope realistically with the emotional turmoil and stress of modern living, the physician has at hand many valuable psychotherapeutic aids. One of the most useful is Librium, a pre-eminent prescription for excessive anxiety in this modern age.

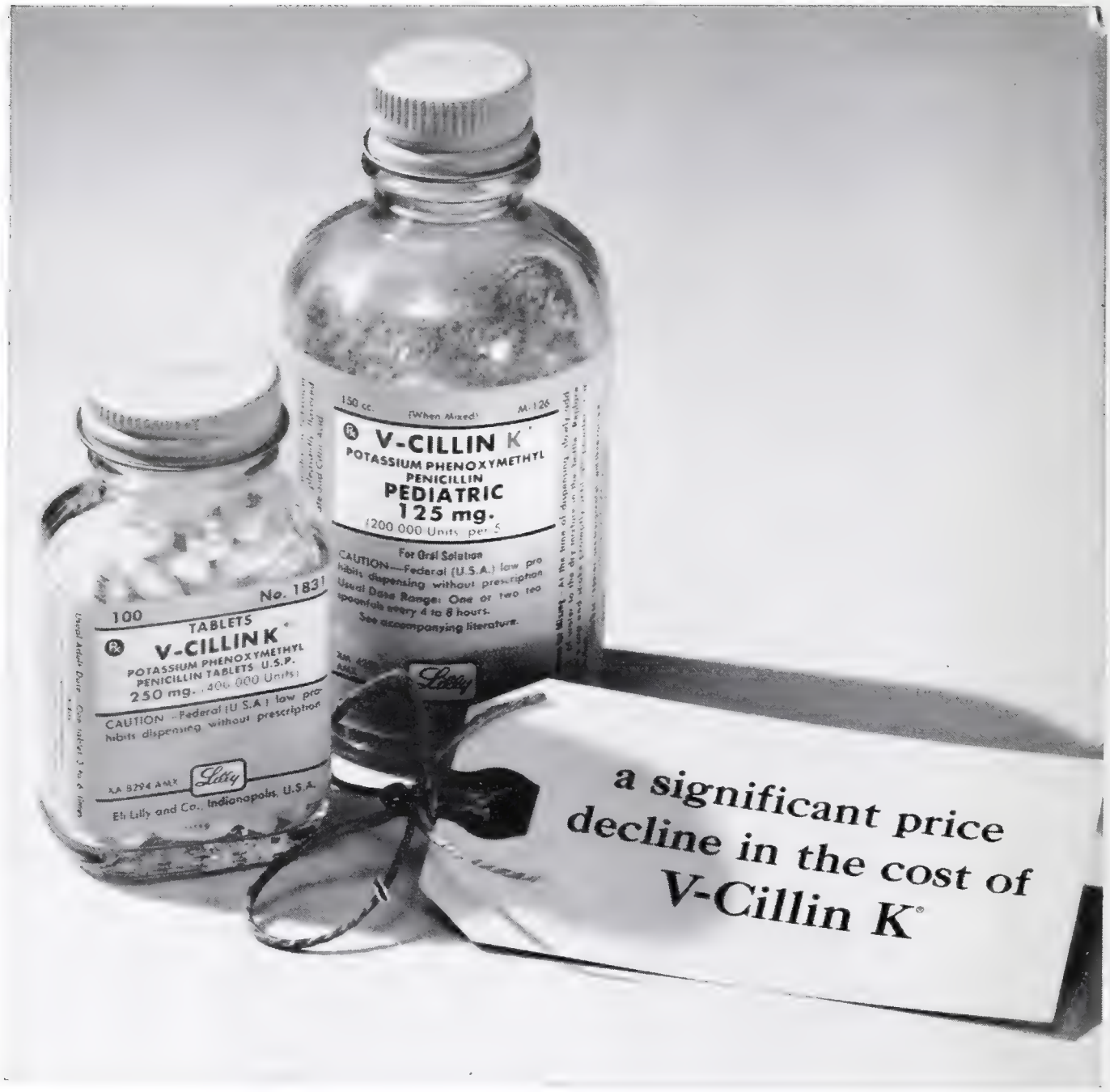
ROCHE

LIBRIUM® (chlordiazepoxide HCl)

5 mg 10 mg 25 mg capsules in #50's

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. **Side Effects:** Side effects, usually dose-related, include drowsiness, ataxia, minor skin rashes, edema, menstrual irregularities, nausea and constipation. When treatment is protracted, blood counts and liver function tests are advisable. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined. **Precautions:** Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, in long-term treatment and in presence of depression or suicidal tendencies. Exercise caution in administering drug to addiction-prone patients or those who might increase dosage; withdrawal symptoms, similar to those seen with barbiturates or meprobamate, can occur upon abrupt cessation after prolonged overdosage. Caution should be exercised in prescribing any therapeutic agent for pregnant patients. **Supplied:** Capsules, 5 mg, 10 mg and 25 mg, bottles of 50.

Roche Laboratories • Division of Hoffmann-La Roche Inc • Nutley, N.J. 07110



V-Cillin K now costs approximately 21 percent less. This significant price decline constitutes a substantial saving and still offers these important benefits over penicillin G:

The effectiveness of intramuscular penicillin. Just three 250-mg. doses daily provide total twenty-four-hour penicillin blood levels equal to those achieved by injection of 600,000 units of procaine penicillin G. A fourth dose increases daily penicillemia to levels 35 percent above those achieved by injection.

Consistent dependability—even in the presence of food. Comparative pharmacologic data show that V-Cillin K produces peak blood levels *twice* as high as those of penicillin G, with *half* the dose.

New, thin coating . . . new size and shape. The new coating eliminates the characteristically bitter taste of oral penicillin and makes V-Cillin K tablets easy to swallow. The new shape makes them easy for physicians and pharmacists to identify.

Indications: V-Cillin K is an antibiotic useful in the treatment of streptococcus, pneumococcus, and gonococcus infections and infections caused by sensitive strains of staphylococci.

Contraindications and Precautions: Although sensitivity reactions are much less common after oral than after parenteral administration, V-Cillin K should not be administered to patients with a history of allergy to penicillin. As with any antibiotic, observation for overgrowth of nonsusceptible organisms during treatment is important.

Usual Dosage Range: 125 mg. (200,000 units) three times a day to 250 mg. every four hours.

Supplied: Tablets V-Cillin K, 125 or 250 mg., and V-Cillin K, Pediatric, 125 mg. per 5-cc. teaspoonful, in 40, 80, and 150-cc.-size packages.

V-Cillin K®

Potassium Phenoxymethyl Penicillin

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana.

Lilly

500990

Removal of just the gastric fibers of the vagus nerve can be confirmed by this simple biologic test.

Selective Vagotomy, Antrectomy, and Gastroduodenostomy for Duodenal Ulcer

KAZUSHI TANAKA, M.D.,* *Kaneohe*

• *Reported here are five cases of chronic duodenal ulcer successfully managed by the use of Henry Harkins' "revised combined operation"—selective gastric vagotomy, antrectomy, gastroduodenostomy—checked up on by estimate of the amount of stomach resected, and by the Hollander test to show loss of gastric secretory response to insulin.*

WHILE Henry N. Harkins, M.D., Professor of Surgery at the University of Washington in Seattle, was here in Honolulu as a Visiting Professor from November through December, 1963, he emphasized gastric physiology and the anatomy of the vagus nerve, and demonstrated the revised combined operation with special reference to selective gastric vagotomy for the treatment of duodenal ulcer. He showed us several technical points and a method to measure the amount of stomach removed.

Rationale of the concept of the revised combined operation:

a. Selective gastric vagotomy: attenuation of cephalic phase of gastric secretion without disturbance of function of gallbladder, pancreas, and bowel.

b. Antrectomy: to eliminate, in so far as possible, the gastric phase of gastric secretion.

c. Reconstitution of GI tract by gastroduodenostomy to eliminate danger of duodenal stump complications and dumping syndrome.

We have performed the revised combined operation on five cases of chronic duodenal ulcer under the direct supervision of Dr. Harkins. In each case, the following procedures were performed: (1) Twelve-hour overnight gastric analysis (except one case). (2) Selective gastric vagotomy. (3) Antrectomy. (4) Gastroduodenostomy (Billroth I). (5) Pattern weight measurement of the resected stomach. (6) Postoperative Hollander test (insulin test).

The purpose of this paper is to present the five cases of chronic duodenal ulcer who had the revised combined operation, to show completeness of selective gastric vagotomy as determined by Hollander test, and to show that selective gastric vagotomy is now being effectively performed in Honolulu.

TECHNICAL FEATURES

- Preoperative twelve-hour overnight gastric analysis is performed.
- Levine tube is inserted preoperatively.
- The abdomen is opened through upper midline incision and was closed with No. 28 monofilament steel wires without peritoneal closure.
- The revised combined operation is performed.

(1) Selective gastric vagotomy. The vagus nerves were identified by means of Griffith's maneuver (picking up a filament of the vagus on the anterior surface of the stomach, and applying traction to put the main trunk on stretch so it can be better identified). Hepatic branch of left vagus and celiac branch of right vagus were preserved.

(2) Antrectomy. The amount of resection was measured by the paper pattern weight method. The Strauss maneuver (approach to a difficult duodenal cuff from the duodenal side rather than the stomach side) was applied for the difficult duodenal cuff.

(3) Gastroduodenostomy (Billroth I). The two-layer anastomosis was performed with the inner mucosal layer of 4-0 continuous chromic catgut and the outer seromuscular layer of 4-0 interrupted black silk. The stoma was exactly five centimeters in diameter.

- Postoperatively the stomach is decompressed with a Levine tube for two or three days.

* Chief Surgical Resident, 1963-1964, Honolulu Integrated Surgical Residency Training Program.
Received for publication September 30, 1964.

- Hollander test (insulin test) is done before discharge.

HOLLANDER TEST (INSULIN TEST)

The main purpose of the insulin test is to determine the completeness and effectiveness with which the vagal innervation of the stomach has been destroyed by vagotomy. The physiologic basis of the insulin test stems from the capacity of insulin to stimulate both major and secretory mechanisms in the stomach by way of the vagus nerve. Transection of all vagal fibers to the stomach will prevent the usual gastric responses to such stimulation. The stimulus to the vagal center in the brain is caused by hypoglycemia induced by the insulin. Unless blood sugar is reduced to 50 mg or less per 100 ml, a response will not be induced regardless of the dose of insulin.

> The insulin test was performed in the following manner (Hollander, 1946): The patient is weighed accurately. The dose of insulin (0.3 unit per kilogram of body weight) is calculated, and placed in a sterile syringe preparatory to giving it intravenously.
>
> The gastric tube is passed, and the stomach is emptied completely. A sample of blood is obtained so that the baseline value for blood sugar can be measured. The insulin is injected intravenously; thereafter, every 15 minutes, a sample of the gastric contents is aspirated and a sample of blood is drawn. The patient is instructed to expectorate all saliva for, soon after the insulin is given, the patient begins to salivate and perspire. The insulin should be given by a physician and the patient should be carefully watched for any sign of a reaction.
>
> At the conclusion of the test, 50 cc of a 50 per cent glucose solution is given intravenously or, if this is not deemed necessary, a glass of orange juice is given.
>
> The amount of sugar in each sample of blood is determined, the volume of each sample of the gastric contents is measured, and each sample of gastric juice is titrated for free hydrochloric acid and total acids. A time chart is prepared, showing these various values. If the level of sugar in any sample of blood is 50 mg or less per 100 ml, the stimulation of insulin is considered to have been adequate.

The test is considered to give positive results if the values for free hydrochloric acid and total acidity are greater than those obtained in the baseline sample. This indicates some intact vagal fibers. Negative results occur when the values for free hydrochloric acid and total acidity do not exceed those observed in the baseline sample.

Some precautions are necessary with this procedure. It is important that the stomach be completely emptied at the time of baseline aspiration and that the patient meticulously expectorate all saliva. Atropine or similar anticholinergic agents should not be used for 24 hours prior to the test.

CASE HISTORIES

CASE 1:

A 31-year-old Caucasian man, married, with three children, was admitted to the hospital on November 3, 1963, with the chief complaint of epigastric pain of five years' duration.

About six years ago, on December 26, 1958, he saw a private physician and complained of epigastric burning pain, radiating to the back of one month's duration. The pain was relieved by ingestion of food. Physical examination was not remarkable at that time. His weight was 133 lbs. CBC, urinalysis, and chest x-ray were normal. Upper GI series on December 27, 1958, revealed two ulcers in the duodenal cap with associated hypertrophic gastritis. The patient was treated with Aludrox and Donnatal. He improved thereafter, but was seen in March, June, August, and September, 1959, with the same complaints despite treatment of above plus Sippy powder and Pathilon with phenobarbital. Thereafter he got along well until May, 1961, when he again came with burning epigastric pain especially at night. He was treated again with Pathilon with phenobarbital and Sippy powder, with improvement. On August 7, 1963, he returned with recurrent epigastric pain. The pain was described as being relieved by ingestion of food. Upper GI series on August 12, 1963, revealed deformity of the duodenal bulb with an active ulcer crater. The patient was again started on anticholinergic (Pathibamate). Epigastric pain persisted despite his taking this and Aludrox. Milk provided relief. He smokes one to two packages of cigarettes daily.

Physical examination revealed a well-developed, well-nourished adult male, apparently in no acute distress, coherent and cooperative. Only positive finding was some epigastric tenderness on deep palpation.

Upper GI series on November 8, 1963, showed deformity of the duodenal bulb with thickened mucosal folds and a rather large ulcer crater situated near the base.

CBC (November 9, 1963): PCV 42%, Hgb. 14.6 grams, WBC 9,000 with 59% polys, 25% lymphs, 6% eosinophiles, and 10% monos.

Twelve-hour overnight gastric analysis: total volume 365 cc., free HCl. 70 mEq/1. Total acid 122 mEq/1.

At laparotomy on November 19, 1963, the main operative finding was a considerable scarring of the duodenum. The revised combined operation with incidental appendectomy was performed. The measured resection (pattern weight method) was 41 per cent. His postoperative course was satisfactory without complications.

Hollander test was performed on November 28, 1963 (ninth postoperative day), and showed some free HCl. Upper GI series was repeated postoperatively on November 29, 1963, which showed satisfactory emptying of the stomach. The

TABLE 1.—*Summaries of the cases treated by the revised combined operation.*

CASES	SYMPTOMS & DURATION	TWELVE-HOUR OVERNIGHT GASTRIC ANALYSIS	UPPER GI SERIES	OPERATION	RESECTION	HOLLANDER TEST	POST-OPERATIVE CONDITION
1. 31 yr. old Cauc. male	Epigastric pain—5 years	T.V. 365 cc. Free HCl 70 mEq/l Total HCl 122 mEq/l	Deformity of duodenal bulb with ulcer crater (11-8-63)	11-19-63	41%	Positive (slight free HCl)	Good
2. 47 yr. old Cauc. male	Recurrent multiple episodes of melena 7 years	Not done	No recent X-rays	11-26-63	38%	Negative	Good
3. 57 yr. old Filipino male	Epigastric pain—4 months Two episodes of melena	T.V. 105 cc. Free HCl 11 mEq/l Total HCl 47 mEq/l	Marked deformity of duodenal bulb with a clover leaf appearance (12-2-63)	12-6-63	39%	Negative	Fair
4. 57 yr. old Filipino male	Epigastric pain—10 years. Recent massive hemorrhage	T.V. 302 cc. Free HCl 47 mEq/l Total HCl 79 mEq/l	Distorted duodenal bulb with possible ulcer crater (11-20-63)	12-5-63	45%	Negative	Good
* Anterior truncal vagotomy was not done due to adhesions and scarring.							
5. 54 yr. old Hawaiian female	Epigastric pain—with vomiting—4+ years	T.V. 430 cc. Free HCl 40 mEq/l Total HCl 115 mEq/l	Pyloric channel ulcer (11-6-63)	12-11-63	40%	Negative	Good
* A benign gastric ulcer found. The procedure was beautifully demonstrated.							

patient was discharged on December 1, 1963 (twelfth postoperative day). Since discharge, the patient has been doing quite well. On January 9, 1964 (50 days after operation), Hollander test was repeated which still showed free acid.

November 28, 1963 (9th postoperative day):

SPECIMEN	BLOOD SUGAR *mg/100 ml*	VOLUME *in ml*	FREE HCL *mEq/l*	TOTAL HCL *mEq/l*
Fasting	92	82	0	57
#1	59	19.5	0	47
#2	14	7	0	33
#3	31	2.2	14	48
#4	31	11.0	8	47
#5	38	8	12	56
#6	53	9	18	68

January 9, 1964 (50th postoperative day):

SPECIMEN	BLOOD SUGAR *mg/100 ml*	VOLUME *in ml*	FREE HCL *mEq/l*	TOTAL HCL *mEq/l*
Fasting	86	90	16	30
#1	55	40	16	48
#2	38	6	16	46
#3	31	8	10	38
#4	42	4	24	46
#5	55	3	22	44
#6	59	7	22	44

CASE 2:

A 47-year-old Caucasian man had a history of gastrointestinal bleeding dating back to 1956, at which time he had a considerable melena followed by extreme weakness and Hgb 3.4 gm. He was treated at home and received no transfusions. He had no x-rays. The patient had been on daily medical management since 1956, taking two Probanthine tablets daily and Gelusil p.r.n. He had two other similar episodes, occurred in 1960 and 1961. Again he had no transfusions or x-rays.

In 1962 he was admitted to the hospital with massive GI bleeding with melena and hematemesis. Hgb was 9.2 gm on admission. PCV was 28%. He was stabilized after three units of blood. Upper GI x-ray series showed duodenal ulcer.

Since this admission the patient has had three episodes of hemorrhage at home with which he noted tarry stool and weakness. Finally he had consented to surgical management. Since he was a difficult patient to manage, an upper GI series was not repeated. The patient was admitted on November 23, 1963, for surgery. In addition to ulcer symptoms he has had burning neck pain and intermittent bilateral ulnar sensory loss. Neurology consultation and x-rays led to the diagnosis of probable cervical disc. Three days prior to admission he had considerable amount of neck pain and was placed on neck traction, with great improvement.

His past history included an atypical coronary occlusion requiring six weeks hospitalization. The last EKG was a normal tracing two years ago.

Physical examination showed a well-developed, well-nourished man, apparently in no acute distress. Pulse was 80 per minute, blood pressure 112/80. Examinations were negative except for slight epigastric tenderness.

Blood count (November 21, 1963) showed PCV 45%, Hgb 15.2 gm, WBC 7,900, with 70% polys, 22% lymphs, 5% eosinophiles, and 3% monos. Urinalysis (November 24, 1963): negative. Prothrombin content was 100%.

No twelve-hour overnight gastric analysis was performed, because the patient refused.

On November 26, 1963, the laparotomy revealed scarring of the duodenum and a strangulated appendix epiploica of the sigmoid colon. The revised combined operation was performed with incidental appendectomy. Thirty-eight per cent resection was performed.

His postoperative course was uneventful. On December 5, 1963 (ninth postoperative day), Hollander Test was performed. It was negative (no free HCl). The patient was discharged on December 6, 1963 (tenth postoperative day), in satisfactory condition.

Hollander test (December 5, 1963):

SPECIMEN	BLOOD SUGAR *mg/100 ml*	VOLUME *in ml*	FREE HCL *mEq/l*	TOTAL HCL *mEq/l*
Fasting	72	150	0	85
#1	57	40	0	65
#2	30	15	0	52
#3	15	15	0	55
#4	30	8	0	50
#5	30	1	0	60
#6	57	10	0	45

CASE 3:

A 57-year-old Filipino man was admitted to the hospital on November 30, 1963, with chief complaints of abdominal pain and melena of one day's duration. He had passed tarry stools 6 to 8 times and vomited bile twice prior to admission.

The patient had been hospitalized on August 19, 1963, because of bleeding peptic ulcer. At that time he was found to have tapeworm infestation and was diagnosed as having manic-depressive psychosis. On September 8, 1963, he was readmitted for antihelminthic treatment.

Physical examination revealed a well-developed, moderately nourished, somewhat pale elderly man, apparently in no acute distress. Temperature 98.0°, pulse 88 per minute, respirations 20 per minute, blood pressure 130/90. Pertinent physical findings were midepigastric tenderness, mild CVA tenderness bilaterally and black stool in rectum.

On admission (November 30, 1963) PCV 35.5%, Hgb 11.4 gm, BSP 1%, chest x-ray was negative.

Upper GI series on December 2, 1963, showed markedly deformed duodenal bulb, almost a cloverleaf appearance, irritable bulb, and persistent postbulbar spastic induration. Barium enema (December 4, 1963) was grossly normal.

Twelve-hour overnight gastric analysis (December 5, 1963): total volume 105 cc., free HCl 11 mEq/1, total HCl 47 mEq/1.

On December 6, 1963, laparotomy revealed an evidence of chronic duodenal ulcer with adhesions and induration about the duodenum. The selective gastric vagotomy with division of the suprahiatal gastric branch, antrectomy, and gastroduodenostomy were performed. The procedure was quite difficult because of an extraordinary omental and mesenteric fat. Paper pattern measurement indicated 39 per cent resection.

The patient was re-admitted and Hollander test performed on January 29, 1964 (54 days after operation). The result was negative.

SPECIMEN	BLOOD SUGAR *mg/100 ml*	FREE HCL *mEq/l*	TOTAL HCL *mEq/l*
Fasting	88	qns	qns
#1	52	qns	qns
#2	72	qns	qns
#3	60	qns	qns
#4	77	0	13.2
#5	29	qns	qns
#6	40	0	10

CASE 4:

A 57-year-old Filipino man was admitted to the hospital through Emergency Room on November 16, 1963, because of a massive upper GI bleeding (Hgb 8.5 gm).

The patient began to pass tarry stools six hours prior to admission. He had had four very black liquid stools and felt dizzy and weak. His past history revealed chronic duodenal ulcer with two episodes of previous massive bleeding.

In 1945 he entered Leahi Hospital with pulmonary tuberculosis and stayed there for five years. In 1953 he had an upper GI hemorrhage for which he received three units of blood. Upper GI series showed a duodenal ulcer. In 1955 he had cholecystectomy for the acute cholecystitis. In 1956 he was hospitalized for chronic alcoholism and malnutrition. In 1961 he was admitted for chronic asthma and bronchitis. In June, 1962, he was again admitted with tarry stools; x-rays suggested esophageal varices. A definitive surgery was not considered at that time because of his poor operative risk.

After admission to Leahi Hospital for tuberculosis, he worked as a tattoo artist and drank very heavily. After admission to Territorial Hospital, Kaneohe, he stopped drinking and smoking (1956).

Before the operation the patient received four units of whole blood. On November 18, 1963, Hgb was 14.4 gm and PCV 45%. Total bilirubin was 1.75 mg %, direct 0.23 mg %, indirect 1.52 mg %. Total protein was 6.5 gm per 100 ml, albumin 4.5 gm, globulin 2.0 gm, A/G 2.3, BSP 13.2. Serum electrolytes: CO_2 19.9 mEq/1, Cl 101 mEq/1, Na 135 mEq/1, K 4.5 mEq/1.

Twelve-hour overnight gastric analysis (Novem-

ber 20, 1963): Total volume 302 cc., free HCl 47 mEq, total HCl 79 mEq/1.

Upper GI series on November 20, 1963, indicated the presence of peptic disease in the duodenum with possible ulcer crater.

On December 5, 1963, the patient was taken to surgery. Findings were: (1) chronic duodenal ulcers (two), (2) duodenal diverticula (two), and (3) massive upper abdominal adhesions. Anterior truncal vagotomy (extensive adhesions prevented selective gastric vagotomy) and posterior selective gastric vagotomy with antrectomy (45 per cent) and Billroth I gastroduodenostomy were performed. The duodenal diverticula were inverted with purse string sutures, and an incidental appendectomy and a tube gastrostomy were performed. The procedure took about four hours and two units of blood were given. The patient tolerated the procedure well.

His postoperative course was uneventful and he recovered quite well without any complication except for asthmatic attacks.

The resected specimen weighed 125 gm without fat. Stomach pattern measurement indicated 45 per cent resection. The distance between the ampulla of Vater and duodenal cuff measured 6.0 cm. On the thirteenth postoperative day (December 18, 1963), Hollander test performed per gastrostomy tube showed no free fluid. After the Hollander test, the gastrostomy tube was removed. The patient was discharged on December 20, 1963 (15th postoperative day), in satisfactory condition. He has been doing remarkably well in outpatient follow-ups.

Hollander test (December 18, 1963):

SPECIMEN	VOLUME *in ml*	FREE HCL *mEq/l*	TOTAL HCL *mEq/l*	BLOOD SUGAR *mg/100 ml*
Fasting	40	0	162	128
#1	15	0	100	100
#2	15	0	158	62
#3	appro. 0.5	0	qns	32
#4	appro. 0.5	0	qns	40
#5	appro. 0.5	0	qns	54
#6	appro. 0.5	0	qns	54

The special features of this case were:

1. Blood volume was determined preoperatively and during procedure blood was replaced according to blood loss determination.
2. A tube gastrostomy was performed because of poor pulmonary condition with chronic bronchial asthma, bronchitis, and old tuberculosis.
3. Incidental appendectomy was performed.
4. The anterior selective gastric vagotomy was not feasible because of extensive adhesions.

CASE 5:

A 54-year-old pure-Hawaiian woman was admitted to the hospital on December 2, 1963, with a chronic pyloric-channel ulcer with intermittent pyloric obstruction of four years' duration. She had had epigastric pain, especially postprandial, with x-ray-proven pyloric ulcer since July, 1961.

In December, 1962, an intensive medical regimen was attempted without much success. Recently she had been unable to eat because of epigastric pain. She denied hematemesis, melena, or significant weight loss. The most recent upper GI series on November 6, 1963, showed a pyloric-channel ulcer.

The operation was postponed because of poor pulmonary condition with chronic bronchitis which was treated with intermittent positive-pressure breathing. EKG, BUN and blood sugar were within normal limits.

On admission, PCV was 42%, Hgb 13.6 gm, WBC 8,100 with 81% polys, 15% lymphs, 1% eosins, 3% monos; urinalysis showed WBC 4-6, RBC 8-10, and trace albumin.

Twelve-hour overnight gastric analysis: Total volume 430 cc., free HCl 40 mEq/1, total HCl 115 mEq/1.

After chronic bronchitis was treated the patient was taken to surgery on December 11, 1963. Findings were: (1) chronic pyloric ulcer with hypertrophy of pyloric musculature, (2) a lesser-curvature benign gastric ulcer, and (3) possible chronic pelvic inflammatory disease, with omental adhesions.

The revised combined operation was performed. The selective gastric vagotomy was easily done. The resected fat-free specimen weighed 80 gm and the stomach pattern measurement showed 40 per cent resection. The distance between the ampulla of Vater and the duodenal cuff measured 6.0 cm.

The unexpected gastric ulcer was histologically examined for Oi's Law. The bordering mucosa on the corporal side contained many parietal cells whereas that on the antral side was devoid of them and contained, instead, well-developed pyloric-type glands, confirming Oi's Law.

Her postoperative course was uneventful and she recovered well without any complication.

Hollander test performed on December 20, 1963 (ninth postoperative day), was negative (no free HCl).

SPECIMEN	VOLUME *in ml*	FREE HCL *mEq/l*	TOTAL HCL *mEq/l*	BLOOD SUGAR *mg %*
Fasting	55	0	60	100
#1	30	0	72	59
#2	7	0	165	28
#3	25	0	180	37
#4	7	0	185	40
#5	0.5	0	qns	50
#6	125	0	245	52

The patient was discharged on December 21, 1963 (tenth postoperative day), in satisfactory condition, and has been doing remarkably well.

CONCLUSION

Of five cases of chronic duodenal ulcer treated by means of the revised combined operation, only one showed a positive Hollander test. All five patients have done well. I do not believe that anyone in Honolulu has been doing the Hollander Test to confirm completeness of vagotomy following the conventional truncal vagotomy. It is, therefore, impossible to estimate how often vagotomy can be complete.

Assurance of completeness of vagotomy at the operating table is made more certain by the anatomic accuracy of the method. As shown by the Hollander test, preliminary results indicate that the selective method is at least as effective in accomplishing complete gastric vagal denervation as is conventional vagotomy technique.

The selective gastric vagotomy is worthwhile trying in order to eliminate complications following conventional truncal vagotomy, which include diarrhea and probable biliary and pancreatic stasis. ■

Room 205, 45-1048 Kamehameha Hwy.

REFERENCES

1. Hollander, F.: The insulin test for the presence of intact nerve fibers after vagal operations for peptic ulcers, Gastroenterol. 7:607-614 (Dec.) 1946.
2. Oi, M., Oshida, K., and Sugimura, S.: The location of gastric ulcer, Gastroenterol. 36:45 (Jan.) 1959.
3. Harkins, H. N., Chapman, N. D., Nyhus, L. M., Stevenson, J. K., Jesseph, J. E., and Condon, R. E.: The combined operation, vagotomy, antrectomy and gastroduodenostomy for the surgical treatment of duodenal ulcer, presented as a scientific exhibit at the 46th Clinical Congress of American College of Surgeons in San Francisco, California, October 10-14, 1960.
4. Harkins, H. N., *et al:* Combined operation: vagotomy, antrectomy and gastroduodenostomy, Arch. Surg. 85:936 (Dec.) 1962.
5. Kraft, R. O., Fry, W. J., and Ransom, H. K.: Selective gastric vagotomy, Arch. Surg. 85:687 (Oct.) 1962.
6. Kraft, R. O., and Fry, W. J.: Operative technique of selective gastric vagotomy, Am. J. Surg. 105:423 (Mar.) 1963.
7. Harkins, H. N., Stavney, L. S., Griffith, C. A., Savage, L. E., Kato, T., and Nyhus, L. M.: Selective gastric vagotomy, Ann. Surg. 158:3 (Sept.) 1963.
8. Stavney, L. S., Kato, T., Griffith, C. A. Nyhus, L. M., and Harkins, H. N.: A physiologic study of motility changes following selective gastric vagotomy, J. Surg. Research 3:8 (Oct.) 1963.
9. Harkins, H. N., Stavney, L. S., Griffith, C. A., Savage, L. E., and Nyhus, L. M.: Selective gastric vagotomy. Presented as a scientific exhibit at the 49th Clinical Congress of the American College of Surgeons in San Francisco, California, October 28-November 1, 1963.
10. Smith, C. K., and Farris, J. M.: Some observation upon selective gastric vagotomy, Arch. Surg. 86:716 (May) 1963.

HAWAII HEALTH FAIR

OCTOBER 9 & 10

"Fever of undetermined origin" turned out to be diphtheria—still of undetermined origin.

Corynebacterium Diphtheriae Septicemia:
Case Report of Successful Treatment

CAPT. LAWRENCE H. GOTTLIEB, MC,* USA,
and MAJ. BENJAMIN J. VELTRI, MSC,† USA

• *The bacteremia has been found by many observers to be common during the day or two prior to the onset of pharyngeal lesions of diphtheria. In this case, positive blood cultures were obtained on the third, fourth, and fifth days of an acute febrile illness which responded to chloramphenicol and streptomycin. No pharyngeal or other local lesions occurred at any time.*

DIPHTHERIA, once a dread killer, today is a problem only in underdeveloped areas. The disease is so rare in the United States that many physicians trained in the past ten to fifteen years have never seen a case.

Yet, patients with diphtheria continue to be seen,[1] occasionally in a rather extraordinary context. Often the traditional pharyngitis is mild or absent and the presenting manifestations are those of meningitis,[2] endocarditis,[3] otitis media, or septicemia. The case we are about to describe reveals another aspect, perhaps unique, of this ancient disease, gone modern.

CASE REPORT

A 42-year-old Caucasian woman was admitted to the hospital on February 3, 1963, with a history of gradual onset of malaise and myalgia 48 hours before, followed by recurrent chills and fever beginning in the evening two days before admission. This was accompanied by frontotemporal headache. Chills and fever to 102.4°F. recurred the following morning. Examination, as an outpatient, early in the afternoon one day before admission revealed a remarkable absence of signs, normal chest x-ray, and leukocytosis of 16,000 with 88% neutrophiles. Antibiotics were withheld.

The clinical course was unchanged, with chills and fever to 102°F.-103.4°F. every four to six hours. Upon admission, the patient denied symptoms of otitis, pharyngitis, or upper respiratory or genitourinary infection.

Past history was unremarkable except for recent exposure to "viral" bronchitis and infectious parotitis. In addition, the patient's ten-year-old child had sustained a 24-hour fever of undetermined origin five days previously. Review of systems was negative except for an asymptomatic genitourinary calculus detected some ten years before.

Physical examination revealed an alert Caucasian woman who vigorously denied all symptoms other than slight headache and fever. Temperature was 102°F., pulse 120, respirations 20, blood pressure 140/70. Thorough, repeated physical examinations remained negative.

Laboratory studies revealed 12,900 leucocytes/mm^3 with 79% neutrophiles, 17% lympho-

* Chief Resident, Department of Medicine, United States Army Tripler General Hospital, APO 438, San Francisco, California.
† Chief, Microbiology Unit, Pathology Service, United States Army Tripler General Hospital, APO 438, San Francisco, California.
Received for publication October 1, 1964.

cytes, 3% monocytes, and 1% eosinophiles. Urine showed a trace of acetone, occasional leucocytes and no bacteria; urine culture revealed over 640,000 colonies of E. coli. Throat culture grew out normal flora. Histoplasmin, coccidioidin and blastomycin skin tests were negative; PPD #2 was positive. Febrile agglutinins showed no titer; heterophile antibody was zero. Chest x-ray, abdominal series, excretory urogram, cholecystogram, upper GI series, small bowel series, mastoid series, and electrocardiogram were normal. Blood cultures were obtained during the ascent phase of each temperature elevation.

For the first three hospital days, the temperature rose every four to six hours to 104.4°F. There was no change in physical status. No focus of infection was discovered at first; treatment was withheld until the evening of the third hospital day. At this time, one of the original blood cultures was reported to be growing a Gram-negative rod. Intravenous chloramphenicol, 2 gm daily, was administered for five days and simultaneously streptomycin 500 mg b.i.d. was given intramuscularly for ten days.

Typical Corynebacterium diphtheriae intermedius organisms were subsequently found in three of the five original blood cultures. Bacteriologic studies of the organism revealed palisading, barrel-shaped, Gram-positive rods, with metachromatic granules, growing as small, flat, dull gray colonies with raised black centers on chocolate tellurite agar and Mueller-Hinton tellurite agar. Peptone broth culture showed a very fine granular growth which later settled, leaving a clear supernatant. There was no hemolysis on fresh blood agar. Fermentation was present only in dextrose; none was present in sucrose, starch, or glycogen. These studies identified the organism as C. diphtheriae intermedius, growing best at 20°C.; it was sensitive to most antibiotics tested.

Within eight hours of the institution of antibiotics, the temperature fell to 100°F., and then gradually descended to normal over the next two days. Repeat urine analysis and hemograms were normal; urine culture was negative. The patient remained afebrile during the remainder of her hospital stay and was still in excellent health six months later.

DISCUSSION

The presence of diphtheria organisms in the blood without evidence of a local diphtheritic process elsewhere in the body is unusual. Septicemia (and endocarditis and meningitis) secondary to both diphtherial and diphtheroid organisms (Corynebacterium sp.) has been recognized for many years. In 1913, Morgan[5] reviewed six cases of septicemia (and endocarditis) complicating classical diphtheria. In three, antitoxin was apparently of no value.

In 1915, Wade[6] felt that diphtheria was accompanied by a transitory bacteremia, but persistence and multiplication of the organism in the blood stream was very infrequent.

In 1927, Martmer[7] noted that septicemia occurred in diphtheria if antitoxin was administered late. It was also thought to develop more frequently in the presence of low host resistance or other bacterial pathogens, and in markedly severe cases. In an extensive review of the English and European literature prior to 1927, Martmer found numerous instances of antemortem diphtherial septicemia in cases of nasopharyngeal diphtheria.

In 1936, Chi-Wu[8] reported a case of fulminant diphtheria in an 18-year-old girl. Pure cultures of C. diphtheriae were isolated from her blood antemortem and postmortem. He felt that the most significant finding in diphtheria was local growth and toxin production; only rarely were the deep tissues involved or the blood stream invaded.

In 1949, Arnold[9] studied the invasive properties of the diphtheria organism in cases of malignant diphtheria; positive cultures were obtained from many organs at autopsy.

Wildführ[4] found, in 202 persons exposed to clinical diphtheria, of whom 31 contracted the disease, that 28 had positive blood cultures during the course of the infection, most often two days prior to apparent localization of the disease in the upper respiratory tract. Paschlau[10] also felt that clinical diphtheria began as a bacteremia followed by localized inflammatory reaction in the pharynx.

In 1950, Krause[11] wrote that diphtheria should be viewed as an invasive process, not a localized infection; bacillemia is a frequent occurrence, even in nonfatal cases. In 1952, Paschlau[12] noted that in early stages of diphtheria, the organism could be cultured from the urine when the patient was febrile but without evidence of pharyngeal diphtheria. This was interpreted as evidence of a bacillemia prior to "localization" in the pharynx. In 1955, Cygankiewicz[13] studied 92 children; he found evidence that C. diphtheriae "does not only act locally, but having strong invasiveness it enters the blood in the early stages of the disease and causes a general infection of the organism." A bacteremia was noted for five or six days in the early course of the disease and a bacteruria was noted on the third or fourth day.

COMMENT

One might assume, then, that our patient was in the early stages of diptheria and that diagnostic

studies and treatment were instituted prior to "localization." On the other hand, an unrecognized primary focus could have been responsible for seeding the blood.

Throat culture was negative; this was anticipated. Urine culture apparently was contaminated with E. coli, as the urine sediment showed no evidence of infection. Unfortunately, cerebrospinal fluid examination was not permitted and a Schick test was not performed.

Chloramphenicol and streptomycin were selected, since original blood smears of the blood culture showed a "Gram-negative" rod (later identified as a Corynebacterium). The rapid clearing of symptoms and continued good health perhaps demonstrated the effectiveness of treatment.

It is interesting to speculate on the consequences of a lack of antibiotic treatment in a person probably inadequately protected against diphtheria. The empirical use of penicillin in a partially suppressive dose might have led to other complications, or at least to confusion, in this case.[14]

SUMMARY

A case of diphtherial septicemia with no recognizable focus is presented. A review of the English and recent European literature reveals the frequent occurrence of septicemia in early clinical diphtheria. We feel this represents a highly unusual, if not unique, clinical experience with C. diphtheriae intermedius. ■

REFERENCES

1. Heath, C. W. Jr., and Zusman, J.: An outbreak of diphtheria among skid-row men, New Eng. J. Med. 267:809-812 (Oct. 18) 1962.
2. Mitchell, F. N., and Waddell, W. W. Jr.: Corynebacterium diphtheriae meningitis, Virginia Med. Monthly 8:113-115 (March) 1956.
3. Amklov, J. R., and Hansen, A. E.: Successful treatment of C. diphtheriae subacute bacterial endocarditis with penicillin and streptomycin, Pediatrics 5:437-442 (March) 1950.
4. Wildführ, G.: Does diphtheria begin with bacteremia? Excerpta Med. (VI) 4:7252, 1950.
5. Morgan, E.: Diphtheria septicemia with report of a case, Am. J. Dis. Child 5:317-321 (April) 1913.
6. Wade, H. W.: Bacteremia due to Bacillus diphtheriae, J. Infect. Dis. 16:292-302 (March) 1915.
7. Martmer, E.: Bacteremia in diphtheria-invasion of the blood stream by the Klebs-Loeffler bacillus and associated organisms, Am. J. Dis. Child 33:895-899 (June) 1927.
8. Chi-Wu, W., and Ts'un, T.: Bacteremia due to the gravis type of Corynebacterium diphtheriae, Am. J. Dis. Child 52:899-903 (Oct.) 1936.
9. Arnold, W.: The bacterial invasion in malignant diphtheria and its pathogenetic importance, Excerpta Med. (VI) 4:819, 1950.
10. Paschlau, G.: Pathogenesis of diphtheria, Excerpta Med. (VI) 4:4957, 1950.
11. Krause, W. W.: Diphtheria as a systemic infection, Excerpta Med. (VI) 4:8651, 1950.
12. Paschlau, G.: New means for the treatment and the prevention of diphtheria, Excerpta Med. (VI) 7:3774, 1953.
13. Cygankiewicz, M., and Siennicki, W.: Incidence of corynebacterium diphtheriae in urine and blood of diphtheria cases, Med. Dosw. Mikrob. 7:41-50, 1955.
14. Franco, F.: Penicillin as an obstacle to bacteriological confirmation of diphtheria, Excerpta Med. (VI) 6:826, 1952.

HMA'S FIRST HEALTH FAIR

OCTOBER 9 & 10

A glosso-buccal presentation of some taxation statistics which led to some unexpected and improbable "conclusions."

Death, Disease, and Property Taxes

ROBERT C. SCHMITT, M.A.,* *Honolulu*

• *The hazard of imputing causal qualities to apparent relationships between statistical facts is vividly demonstrated by comparing property tax levels with the likelihood that those taxed have been admitted to a mental hospital, had a venereal disease, died, or developed tuberculosis.*

DO OAHU'S high property taxes make people sick? Drive them crazy? Lead them into sin? Kill them?

Correlation analysis of census tract data on assessed values and various death, disease, and social disorganization rates seems to suggest that such may indeed be the case. High correlation coefficients were found in most instances, even after adjusting for the effect of income levels and substandard housing. Admittedly, correlation does not necessarily imply causation. Its presence, however, often provides a helpful clue to possible cause-effect relationships.

The analysis was based on assessed valuation per acre for land and improvements combined (including tax-exempt property) for the 42 Oahu census tracts as of 1950. Independent variables included the following:[1]

1. Average annual civilian resident deaths, 1948-1952, per 1,000 civilian population, 1950.
2. Deaths under one year per 1,000 live births, 1948-1952.
3. Average annual civilian deaths by suicide, 1948-1952, per 1,000 civilian population 14 years old and over, 1950.
4. Average annual new civilian tuberculosis cases reported, 1948-1952, per 1,000 civilian population, 1950.
5. Average annual new civilian venereal disease cases reported, 1950-1952, per 1,000 civilian population 14 years old and over, 1950.
6. Average annual civilian first admissions to the State (then Territorial) Hospital for mental disorders at Kaneohe, 1948-1952, per 1,000 civilian noninstitutional population, 1950.
7. Illegitimate births per 1,000 live births, 1948-1952.
8. Families with juvenile offenders, 1948, per 1,000 families, 1950.
9. Average annual civilian admissions to Oahu Prison, 1949-1951, per 1,000 civilian population 14 years old and over, 1950.

Two control variables were used: families and unrelated individuals with 1949 incomes of $3,000 or more as a per cent of all families and unrelated individuals in 1950, and the per cent of dwelling units dilapidated or lacking private bath in 1950.

Zero-order correlations without exception were positive, ranging from 0.086 to 0.892. The highest coefficient was that found for mental hospital admissions; the lowest, for suicides. Venereal disease and over-all crude death rates were likewise closely associated with property values per acre. A low correlation was found for infant mortality. Other coefficients were intermediate.

[1] Data for all variables were taken from the Honolulu Redevelopment Agency, "Characteristics of Oahu Census Tracts, 1940-1950," *Redevelopment and Housing Research*, No. 11, January 1958, pp. 5-19.

* State Statistician, Department of Planning and Economic Development, State of Hawaii.

Received for publication August 24, 1964.

Simple and partial correlations between assessed property values and death, disease, and social disorganization rates for Oahu census tracts: 1950.

RATE CORRELATED WITH ASSESSED VALUE PER ACRE	SIMPLE CORRELATION COEFFICIENT	PARTIAL CORRELATION COEFFICIENT, HOLDING CONSTANT—	
		Income level	*Quality of housing*
Crude death rate, all causes	0.743	0.714	0.699
Infant death rate	.246	.143	.168
Suicide rate	.086	.039	.006
Tuberculosis case rate	.657	.624	.608
Venereal disease case rate	.851	.859	.835
Mental hospitalization rate	.892	.886	.881
Illegitimate birth rate	.448	.394	.347
Juvenile offense rate	.499	.448	.419
Prison admission rate	.502	.425	.387

Partial correlation analysis resulted in little change. With income levels held constant, partial correlation coefficients ranged from 0.039 to 0.886; with housing quality held constant, they ranged from 0.006 to 0.881. As with the simple correlations, mental hospital admissions showed the highest degree of association with assessed values, and suicides ranked lowest.

The correlation coefficients are reported in detail in the accompanying table.

These relationships suggest some interesting questions:

1. Do high property assessments induce mental disorders in residents, increase their vulnerability to communicable diseases, and drive them to lawless behavior?
2. Alternatively, do unbalanced, sick, or criminal neighbors push up property values?
3. Or, perhaps, do State tax assessors take advantage of the psychotic, ill, and arrest-prone?
4. Or is the relationship more complex? Perhaps mixed land uses—the jumbling of commercial, industrial, and residential land in close juxtaposition—simultaneously result in higher property values and the kind of living environment that leads to community health and welfare problems. This hypothesis receives little support, however, from partial correlation analysis.
5. What about control measures? Do these correlations suggest that property values can be reduced by improving mental health or eliminating venereal disease? Or conversely that health and social conditions can be improved by cutting assessed values?

Whatever the answers—if, indeed, any can ever be found—the foregoing discussion may have some positive value. First, it illustrates how fortuitously high correlation coefficients, honestly computed from objective, unambiguous statistics, can lead to murky, contorted, wrong-headed, or outlandish speculation regarding causal relationships. Correlation analysis is inherently prone to such pitfalls and pratfalls.

Apart from such didactic value, however, this exercise supplements an old saw with new empirical evidence of a uniquely statistical nature: not only are death and taxes equally certain in this world; on Oahu, at least, they are highly intercorrelated. ■

Heigh, ho!

COME TO THE FAIR!

Hawaii's Health Department has been collecting vital and death statistics for close to 70 years. They're getting better all the time!

Collection and Utilization of Vital and Health Statistics in Hawaii

RICHARD K. C. LEE, M.D.,* and CHARLES G. BENNETT, B.S., M.A.,† *Honolulu*

• *Vital statistics have been gathered in Hawaii since 1841; the Health Department has had this job since 1896. In 1947, the Bureau of Vital Statistics was renamed the Bureau of Health Statistics, and its work was considerably extended beyond just births, deaths, and marriages. In 1960, a further expansion in size and scope of work occurred when Hawaii became a State; the unit is now called the Research, Planning and Statistics Office.*

AFTER well over half a century as a territory, Hawaii became the 50th state of the United States in 1959. It is situated on a group of islands 2,000 miles from the North American mainland. The four principal islands comprising the state are Oahu, Hawaii, Maui, and Kauai. About 80 per cent of the population, and the major city, Honolulu, are located on Oahu.

The total population is about 700,000. Caucasians and Japanese, almost equal in number, are the largest ethnic groups of the Islands. The two together comprise 64 per cent of the population. Other major groups are Chinese, Filipinos, and native Polynesians. There are also numerous other minority groups of various ethnic extractions.

Following the state pattern of centralization in government, all public health authority is vested in the State Health Department, which in the most populous county (Island of Oahu) serves in the dual capacity of both state and local health agency. District health departments in the other counties are less autonomous and receive less financing from local sources than is generally true for county and municipal health organizations in other states.

Hawaii is the state with the oldest health department in the nation. A Board of Health was established in 1850 while the islands were still a kingdom under the Polynesians.[1] Not until 1896 did the Board become responsible for vital statistics. A Bureau of Vital Statistics was created in that year. Previously, the Department of Public Instruction had registered births, deaths, and marriages. Some of its vital records go back to 1841.

In 1947 the Bureau of Vital Statistics was reorganized and renamed the "Bureau of Health Statistics." Its work was then extended well beyond the field of vital statistics, which dealt exclusively with births, deaths, and marriages. Following statehood, a second reorganization took place in 1960 primarily for the purpose of increasing assistance to all branches of the Health Department in the areas of research and program planning. The new and enlarged unit was called the "Research, Planning and Statistics Office."

THE RESEARCH, PLANNING AND STATISTICS OFFICE

Major functions of the Research, Planning and Statistics Office are to advise and assist in all phases of research and program planning throughout the Health Department, to carry out research projects independent of other units, to maintain a statewide vital statistics registration system, and to produce vital and health statistics needed in public health planning and practice.

The Office is divided into two major parts: a statistics branch and a vital records branch.

* Director of Public Health and Medical Activities, University of Hawaii.
† State Registrar of Vital Statistics, Hawaii State Department of Health.
Received for publication March 13, 1965. From a paper used in the Technical Discussions of the 15th Regional Committee Meeting of the WHO for the Western Pacific, September, 1964.

The Director of the Office is a physician with special training and experience in statistics. Although head of a staff unit, he ranks with executive officers of other major units of the Health Department.

A feature of statistical organization in the Department is that vital statistics—including the registration and compilation of statistics on births, fetal deaths, deaths, marriages, and divorces—is maintained as an integral part of the Research, Planning and Statistics Office.‡ This follows the concept that vital statistics contribute data essential to public health planning and research, and that every phase of producing them should be under the direction of qualified statisticians.

VITAL STATISTICS REGISTRATION

One local registrar in each county, assisted by deputies, is appointed to collect and review vital statistics records. In the City and County of Honolulu where the State Health Department is located, the local registrar is a full-time civil service employee. In the outlying counties, the county health officer serves as the local registrar. A "State Registrar," who is also Assistant Director of the Research, Planning and Statistics Office, heads the registration system. Although differing in some respects, the general system of registering births, fetal deaths, and deaths in Hawaii is similar to that in other states of the country. The *Physicians' Handbook on Death and Birth Registration,*[2] published by the U. S. Public Health Service, indicates in greater detail the general system of the United States.

After securing a review and the signature of the attending physician, the hospital where a birth occurred files a certificate of birth with the local registrar. Nearly all births are in hospitals. The few occurring elsewhere are reported by the birth attendant or family.

Deaths are reported by the funeral director in charge of interment. He obtains personal particulars about the deceased from relatives and a cause of death statement and signature from the attending physician. Upon presenting a satisfactory death certificate, the funeral director receives a disposal permit from the local registrar.

Fetal deaths are also reported on a certificate form by the funeral director in cases where one is employed. If no funeral director is involved, the hospital where the event occurred reports. For most early fetal deaths, it is generally the hospital.

After every marriage ceremony, the officiant files a completed marriage certificate with the local registrar. An officiant is always either a minister of a church or a member of the State's judiciary. To legally carry out a marriage ceremony, he must be commissioned by the State Health Department.

In addition to commissioning officiants to perform the marriage ceremony, and filing completed certificates of marriage, the Research, Planning and Statistics Office also issues marriage licenses.[3] This centralized control of the marriage system facilitates enforcement of marriage laws and regulations, produces uniform procedures and forms throughout the State, and makes changes or improvements, within the framework of existing law, relatively easy.

The clerk of each circuit court reports divorces on a certificate form. He certifies that the information given therein is that shown in the court's final decree granting divorce.

The content of all certificate forms follows closely recommendations of the biennial "Public Health Conference on Records and Statistics" sponsored by the U. S. Public Health Service.[4] Hawaii, like every other state, accepts these recommendations, with the result that similar data are obtained from all areas of the country. If all states did not collect essentially similar data, reliable national vital statistics for the nation would not be possible.

Except for microfilming for security purposes, only one copy of each certificate is made. After processing, these are bound in books and filed permanently in the Research, Planning and Statistics Office. Just in case the original certificate should be destroyed, microfilm copies are stored in an underground tunnel.

The County Health Officer, who is also the local registrar in each of the outlying counties, makes ledger entries from birth and death certificates for current use in public health work. In most instances, however, he obtains statistics from the central office.

Plans are underway whereby microfilm images will be used in the near future for making certificate copies needed for legal purposes. This will prevent wear and tear on the original documents and alleviate the problem of readily accessible filing space.

THE UTILIZATION OF VITAL STATISTICS

Vital statistics documents, including certificates of birth, death, marriage, and divorce, are widely used by individuals and agencies for legal purposes, such as establishing citizenship, entering school, obtaining licenses, voting, entering employment or military services, proving legal dependency or age of capacity, liquidating estates after death, and obtaining social security benefits.

‡ In this report, statistics pertaining to health other than vital statistics are considered to be "health statistics."

The documents are also used widely in public health work. For example, photocopies of infant death certificates with matching birth certificates are supplied to a medical group studying infant and maternal health; copies of death certificates are used to determine the incidence of specific cause of death and nature and place of occurrence of fatal accidents; and home deliveries as indicated on birth certificates are visited by public health nurses. Medical health information is part of the certificate of live birth, but it is not reproduced on copies for public use.

Other uses of documents include the transmittal of copies to the National Vital Statistics Division for use in producing national statistics; notices to consulates of foreign countries concerning the deaths of their nationals; listings sent to county clerks showing the deaths of residents 20 years of age and over for purging voter rolls; notices to the Immigration and Naturalization Service relative to the deaths of aliens; tracing of genealogy; and daily listings of all vital statistics events for the press. Increasingly, the documents are being used as a basis for research. For example, a project is currently underway using a cohort of births for the investigation of the incidence of mental illness.

SPECIAL TABULATIONS MADE

Monthly and annual statistical reports are issued giving a variety of data. A major task of the Research, Planning and Statistics Office is compiling the "statistical supplement" to the Health Department's annual report. About half the tables in this statistical volume pertain to vital statistics; the remainder constitute selected data from other units of the Department. In addition to routine reports, many special tabulations are supplied to individuals and agencies requesting them.

Marriage and divorce statistics are in demand by sociologists, demographers, and certain community agencies such as the Commission on Children and Youth. The subject of interracial marriage is frequently of particular interest. As far back as 1937, a volume appeared on this subject using extensively data from the vital statistics office.[5] Currently, 38 per cent of all marriages in Hawaii are between persons of differing ethnic background.[6]

Vital statistics are used routinely in making estimates of population and in computing life tables. They are also used extensively in research. For example, a recent ten-year study of cardiovascular-renal mortality by major ethnic groups showed that persons of Japanese descent had the lowest death rate and native Polynesians the highest.[7] This has led to an extensive research project, supported by the U. S. Public Health Service, attempting to find reasons for this difference. Medical examinations, laboratory tests, and dietary investigations are being made on a sample of both ethnic groups.

Using primarily birth and death data and the number of civilian passengers arriving and departing, the Research, Planning and Statistics Office makes and distributes semiannual estimates of population between decennial census years by counties and cities.[8] The beginning base is, of course, the last census. These estimates are widely used by health departments, other governmental agencies, research organizations, and business firms both in Hawaii and on the mainland.

The Office obtains the number of births and deaths occurring from its own files; the number of civilian passengers is supplied through monthly reports of commercial carriers and the armed forces. Although no statute exists requiring it, the transportation agencies involved are generally cooperative in sending reports to the Health Department.

The estimates are recognized as approximations only, without the accuracy of an actual population count. Nevertheless, during the past 12 or more years, they have reflected increases or decreases in the population and they have been in close agreement with findings of the Federal decennial census. The method used in making the estimates is applicable because of the State's insular nature with relatively few points of entry and departure. Experimentation appears to indicate that no better method of estimating for this particular state is available.

Based principally on building and demolition permits, estimates of population and the number of dwelling units by census tracts of Oahu and by judicial districts of the other major islands were issued for the years 1957 and 1958.[9] Similar estimates for years of the next decade are in preparation. The Planning Department of the City and County of Honolulu is assisting materially in the work.

The State Department of Planning and Economic Development is responsible for projections of future population.[10] Demographic and economic factors are taken into account. These projections are widely used in public health planning and, of course, in many other areas.

THE HEALTH SURVEILLANCE PROGRAM

The Research, Planning and Statistics Office in collaboration with the Public Health Nursing Branch initiated in 1964 a continuous health surveillance program or survey whereby a sample of households on the Island of Oahu are to be visited each month for information on health and matters related to health. The basic purpose of the program is to obtain data concerning the amount and

kinds of illness and injury occurring, and to indicate the effects in terms of disability and chronic impairments. Obviously, reliable information of this type has important implications for program planning and evaluation in the health field.

In 1958, the National Health Survey Program of the U. S. Public Health Service, working in collaboration with local health agencies, extended its household survey operation to the Island of Oahu for a period of one year as a special study.[11] Results of this project were widely accepted and used in public health work; moreover, during the course of the project, local statisticians gained invaluable experience in the use of well-tested health survey procedures and techniques.

The State Health Department maintains statewide case registers for tuberculosis, Hansen's Disease, mental illness, and mental retardation; it also collaborates with the Hawaii Medical Association in operating a tumor register. The record of each case in these registers includes such information as results of medical examinations, diagnostic findings, treatment, and socio-economic data. Registers serve to facilitate case management and the production of statistics useful in program planning and evaluation. They also afford a base for special research projects either by supplying known cases for study or by leads shown in register statistics.

TUBERCULOSIS REGISTER

The tuberculosis register was established in 1910 and reorganized in 1946. It contains data on all known cases and follows standards as high as or higher than those of the U. S. Public Health Service.[12] All new cases of tuberculosis are reportable to health authorities and kept under surveillance. Local health offices send data to the State register.

A register of Hansen's Disease patients contains records going back to 1866. Data are collected from two institutions and the Department's outpatient services. Case histories after about 1930 are detailed and complete. This register offers an opportunity for the study of leprosy to be found nowhere else in the United States.

A psychiatric case register was established in 1962 in the Division of Mental Health. By means of a centralized reporting system, patient data are collected from all psychiatric services of the Department, including the State hospital.[13] Eventually, data from other sources, such as psychiatrists in private practice and general hospitals with psychiatric services, may also be included.

Cooperatively sponsored by the Hawaii Medical Association, the Hawaii Cancer Society, and the Health Department, the Hawaii Tumor Registry was created in 1959. It is a system of individual hospital registers plus a central register. Data on all patients admitted to hospitals with a malignant neoplasm, or with one of several selected benign neoplasms, are included. To a large extent, the system follows recommendations of the Committee on Cancer of the American College of Surgeons.[14]

A register of nursing and "care" homes together with data on each individual patient in them is being developed. At present, the major purpose of the register is to insure that patients are in homes suited to their needs. Eventually, statistics on the homes and patients will be produced periodically from the register.

COMMUNICABLE DISEASE AND OTHER HEALTH STATISTICS

The Epidemiology Branch produces monthly, quarterly, and annual statistics pertaining to communicable diseases. These are based on reports from physicians, nurses, directors of laboratories, and others who detect cases. Notification is required by law and reporting may be by telephone or by mail, or by both methods. Telegraphic reports for the State are sent to the Public Health Service to provide national intelligence on occurrence. The entire reporting system follows closely national recommendations on the subject.[15]

Other types of health statistics for administrative and planning purposes, not previously mentioned in this report, are also produced in the more than 30 basic units of the State Health Department. Some of these appear in monthly reports to the Director of Health or in the Department's annual reports; others are retained in the files only for reference.

A few examples of other health statistics might include the number and types of positions in the Department; the number and type of medical practitioners in the State; staphylococcus phage types by source from which specimens were received; sanitary ratings of swimming pools and bathing beaches; laboratory analyses in microbiology, virology, water, milk, and foodstuffs; results of screening tests for diabetes; immunizations of preschool children in child health conferences; types of services to crippled children; the number of beds and bassinets in hospitals; summaries of dental treatments among school children; the characteristics of patients admitted to the alcoholism clinic; public health nursing activities in school health programs; x-ray case finding activities for tuberculosis; statistics provided by the institutions for the mentally ill, the mentally retarded, Han-

sen's Disease, tuberculosis, etc.; and the movement of health education films on loan.

HEALTH RESEARCH

Hawaii affords a unique laboratory for health research among various ethnic groups living together in the same setting; moreover, all of these people have democratic relations with one another without the wide social and economic gulf frequently separating ethnic and cultural groups in other parts of the world. Some recent studies involving ethnic groups include research on the prevalence of gastric and lung cancer in the Japanese, the health of Japanese Americans as indicated in a health survey,[16] a genetic study relative to the progeny of interracial mixtures,[17] and a survey using a "Clinitron" to determine the ethnic distribution of diabetes.[18]

Other research projects of note recently completed or underway are a study of fetal wastage, studies on reservoirs and vectors of plague, chemoprophylactic study of inactive tuberculosis cases, the effects of fluoridation on dental decay rates in a plantation community, remotivation of chronic schizophrenic patients, the prevalence of leptospirosis antibodies in a human population, and studies of human factors in traffic accidents.

As elsewhere in the nation, health research in Hawaii has been greatly stimulated in recent years by the availability of grants from the Federal government and private foundations. The State Health Department in 1963 was conducting or collaborating in more than 25 projects. The University of Hawaii, voluntary health agencies, and several hospitals are also actively engaged in health research.

The recent establishment of the Pacific Biomedical Research Center at the University of Hawaii promises to give further impetus to health research in the State. It is now developing facilities for conducting research and graduate education in all basic fields of medical science, excepting the clinical. A Department of Public Health was inaugurated at the University in 1962 and a "College of Biomedical Curricula" (two-year medical school) is being planned.

CENTRALIZED DATA PROCESSING

An integrated statewide data processing system, as recommended by a well-known management consultant firm, is now being implemented. Encompassing the 18 departments of the State government, the system will include three electronic data processing centers. At the University of Hawaii, the Computer Laboratory facilities with the IBM 1401 and IBM 7040 units provide the most extensive data processing service in this area of the Pacific.

CONCLUSION

The collection and uses of vital and health statistics have been an important function of the Board of Health of Hawaii since its early establishment many years ago when Hawaii was a kingdom. Today, Hawaii's agencies perform these functions much more extensively and intensively. It uses such data for planning and research. Its health workers constantly make use of these essential data for scientific and administrative purposes in its daily activities. Collecting and computing statistics and using it wisely have helped health workers develop and maintain strong programs in research, training, and services for Hawaii's people. ■

REFERENCES

1. Ackland, R.: A Century of Public Health in Hawaii. Office of Health Education, Territorial Department of Health, Honolulu, 1949.
2. Physicians' Handbook on Death and Birth Registration, 11th edition. National Office of Vital Statistics, Public Health Service, Washington, 1958.
3. Manual of Procedure for Issuing Marriage Licenses. Bureau of Health Statistics, Territorial Department of Health, Honolulu, 1955.
4. The Public Health Conference on Records and Statistics. The Registrar, Vol. 23, No. 2, February 1958. National Office of Vital Statistics, Public Health Service, Washington.
5. Adams, A.: Interracial Marriage in Hawaii: The Macmillan Company, New York, 1937.
6. Statistical Report 1962, State Department of Health, Honolulu, 1963.
7. Bennett, C. G., Tokuyama, G. H., and McBride, T. C.: Cardiovascular-renal mortality in Hawaii, Am. J. Pub. Health 52:1418 (Sept.) 1952.
8. Estimated Civilian Population of the State of Hawaii by Geographic Area: July 1, 1963. Research, Planning and Statistics Office, State Department of Health, Honolulu, 1963.
9. Tokuyama, G. H., and Louis, L.: Estimated Civilian Population and Dwelling Units of Oahu Census Tracts, July 1, 1958. Bureau of Health Statistics, Territorial Department of Health, Honolulu, 1959.
10. Population Projections for Hawaii, 1963-1983. State Department of Planning and Economic Deve'opment, Honolulu, 1963.
11. The Hawaii Health Survey. U.S. National Health Survey, Series C, No. 3. Public Health Service, Washington, 1960.
12. State Central Case Record Systems and Local Case Registers for Tuberculosis. North Carolina State Board of Health in cooperation with Tuberculosis Control Division, Public Health Service, 1947.
13. Statistical Procedure Manual (mimeographed). Mental Health Division, State Department of Health, Honolulu, 1962.
14. Manual for Cancer Programs. Department of Professional Services and Accreditation, American College of Surgeons, Chicago, 1961.
15. National Morbidity Reporting: Manual of Procedures. National Office of Vital Statistics, Public Health Service, Washington, 1956.
16. Bennett C. G., Tokuyama, G. H., and Bruyere, P. T.: Health of Japanese Americans in Hawaii, Pub. H. Rpts. 78:753 (Sept.) 1963.
17. Morton, N. E.: Genetics of interracial crosses in Hawaii, Eugenics Quarterly, Vol. 9, 1962.
18. Sloan, N. R.: Ethnic distribution of diabetes mellitus in Hawaii. J.A.M.A. 183:419 (Feb. 9) 1963.



The President's Page



The first HEALTH FAIR, sponsored by the Hawaii Medical Association, will be held at the Honolulu International Center, October 9 and 10. This health spectacular will bring to our citizens a tremendous variety of health exhibits, and will call attention to the public of the extensive ramifications of medicine and allied health fields. It is the first endeavor of such magnitude in which the Hawaii Medical Association has ever engaged. It will not only require the efforts of those physicians who have offered to operate the booths and exhibits in which they are interested, but the efforts of many more of us.

Over sixty exhibitors will participate and the exhibits cover such a variety of subjects that they are too numerous to describe in detail in this article. The entire time of at least two of our executive personnel is now being utilized as well as a great contribution of time, effort, and ingenuity of the Chairman, Dr. John R. Stephenson.

It is a continuation of our public relations project and the public will be getting a big dividend bonus in return.

There is something for everyone at a Health Fair. Similar fairs have been held in various mainland communities—the first having been sponsored by Dade County Medical Society at Miami, Florida. Some fairs have outdrawn the rodeo and county fair.

Visitors of all ages find something to stimulate them as they view this panorama of medical progress. Photographs, models, graphic visuals, motion pictures, and sound tapes will be used. Students see exhibits on health careers staffed by doctors, nurses, and other health personnel.

In addition to the many exhibits and continuous movies that will be shown from noon until closing time, there will be free tests for glaucoma, tuberculosis, diabetes, emphysema, blood pressure, and electro-cardiography. There will be a display by NASA (National Aeronautics and Space Administration) featuring mental and physical preparation for space travel, a mock-up of an Apollo space capsule, and samples of food and other essentials used in space travel. Monitoring devices for blood pressure, heart beat, etc., during space travel will be on display, as well as audience participation features to simulate space flight. The above is just a part of the many feature attractions.

Our goal is an attendance of 10,000.

The Fair cannot be a success without the help of our own members. This is basically our show so please come out and help run it. We won't ask you again for two or three years.

For an almost complete list of organizations who are participating in this top-notch show please turn to page 51.

Ord Pinkerton

HAWAII MEDICAL JOURNAL

Editorials

The Medical School is Coming

On July 30, St. Francis Hospital signed the following articles of affiliation with the University of Hawaii.

ARTICLES OF AFFILIATION

For the purpose of enhancing medical knowledge and practice, the University of Hawaii and St. Francis Hospital enter a program of affiliation. The program will seek to develop all possible areas in which, by mutual help and cooperation, medical teaching, research and service can be improved.

Provisions

1. The faculty of the School of Medicine of the University of Hawaii will cooperate with St. Francis Hospital particularly in the areas of teaching and research.
2. St. Francis Hospital will participate through the provision of space and material for teaching and research, and staff members interested in the teaching of medical students and in cooperative research projects.
3. This agreement may be reviewed annually. Withdrawal from this agreement of affiliation may be effected by either party upon written notice, to be effective one year after the anniversary date following notification.
4. The University looks forward to similar affiliation with each of the other Honolulu hospitals that may desire such relationship.
5. St. Francis Hospital will continue to cooperate in medical education programs integrated with other hospitals and community agencies.

By: Robert W. Hiatt
Acting Executive Officer
University of Hawaii

By: Sister Maureen
Administrator
St. Francis Hospital

July 30, 1965

Dean-designate Dr. Windsor Cutting and Dr. Bernard Yim are to confer on the specific items of the relationship between the hospital and the University, but the tentative proposals are about as follows.

The University will place its Professor of Medicine—selected, but not yet announced—and its Professor of Pathology at St. Francis Hospital, probably in offices in the soon-to-be-vacated School of Nursing.

Basic science lectures, and some clinical lectures, will be made available to the house and visiting staffs of the hospital, and to medical students.

The hospital in turn will provide, in addition to office and classroom space in the former School of Nursing, patients on whom physical diagnosis can be taught. The inevitable upgrading of the quality of care furnished to such patients as may agree to make themselves available for this purpose cannot fail to compensate them amply for the small inconvenience involved.

Similar articles of affiliation have been concluded, as we go to press, with Kauikeolani Children's Hospital and Kapiolani Hospital and presumably similar mutually beneficial arrangements will be concluded with them. Children's has been most outspoken in its desire to cooperate fully with the University, even to moving its plant there, should this become feasible.

At the moment, it is thought that Tripler Hospital may participate in the over-all program by providing training facilities for technicians and nurses, and interns. Queen's and Kuakini, at this point, will at least provide areas for medical research, as will Kaiser Hospital. Leahi may furnish special opportunities for physical diagnosis, perhaps in relation to diseases of the chest. The role of Shriner's Hospital is still moot.

It seems likely that the facilities made available by St. Francis' decision to close its School of Nursing have made it possible to anticipate the original opening date of the medical school program by about one year. All in all, the degree of cooperation that has been achieved seems cause for considerable satisfaction on the part of the University and the Honolulu community. Town and Gown are moving forward in step, following competent, informed, effective leaders. We may both congratulate ourselves!

Town and Gown: A Partnership

PRIVATE PHYSICIANS and local hospitals face both opportunities and problems in respect to the developing School of Medicine in this State. It is my hope that by clearer understanding and mutual good will you will have an opportunity to avoid the kind of degrading and destructive spectacles which have occurred in town and gown conflicts all over the world. It may well be that it takes twenty years for any new medical school to win wholehearted acceptance and that some strains are inevitable when a new force is brought into a medical community, but with tact and understanding, and with a good appreciation of the mission of Medicine in our society, this struggle need not be.

The Council on Medical Education of the A.M.A. has suggested that we require at least ten more medical schools with an average yearly enrollment of 100 students in order to keep up with our population boom. Your new School is of legitimate interest to any group of public spirited citizens, and physicians have no monopoly in considering and planning for future human resources in the field of medicine. Even though most of us would admit that many groups have a justified interest in the future physician, some would love to keep it a family affair. Alan Gregg has wisely said that "Professionally, doctors resemble dictators alternating between complete disregard of criticism and exquisite sensitiveness to it. Operating in an atmosphere of crisis met with confidence, we naturally develop a singular insularity of view, a sort of professional exemption from challenge and education at the hands of healthy and disputatious laymen. We behave as though we were a group set apart, and that attitude degenerates into a kind of professional provincialism."

As a full-time medical teacher I am keenly aware of a serious and rarely discussed problem which is subtle in nature but which nonetheless concerns all of us greatly. That is the relationship between practicing physicians and those charged with educating the medical students of the future. This is a highly emotional matter which is generally glossed over, but I believe it has a direct bearing on the education of doctors and, therefore, on the future of medicine. "Would that I had the light touch to deal with so delicate a theme! Blunt handling of it would produce some of the memorable effects of massaging osteomyelitis." (Gregg)

Mistakes have been made, and are still being made, by both sides. I am aware that some scientifically oriented medical teachers have tended to devalue the art of medicine in their teaching. The pendulum has swung from the time when medicine had very little science and much art, to a time when it has a staggering amount of science and little time for art. It is important that teachers of medicine truly feel a healthy respect for the difficulties and responsibilities of conducting a private medical practice, and it is essential that in their relations with medical students and house officers the practicing physician be identified, in attitude and fact, not as the L.M.D., but as the respected colleague into whom the respective medical student or house officer himself will turn in a short time. But this is a two-way street. If some medical teachers have tended to look askance at medical practice, so have some practitioners tended to devalue the fields of medical research and the full-time medical teacher.

Antagonism between "town" and "gown" virtually did not exist at a time when professors of clinical disciplines were at once some of the outstanding private practitioners of medicine in the community. Many of the problems in this field relate to the current dichotomy. In any such struggles, regardless of immediate outcome, nobody wins and medicine as a whole loses. Moreover the medical student of the future could clearly become an unhappy pawn in these destructive and irrational conflicts.

Many medical schools enjoy a truly wonderful relationship with the medical practitioners in their vicinity. Other schools encounter tenacious opposition from some prominent physicians in their own community. Often, this opposition is centered within the Medical Society, whose leaders may feel that they have the right to tell deans and University presidents what they may or may not do. Organized medicine has assumed a direct role in the financial well-being of medical schools. But all doctors have also a direct stake in the emotional well-being of medical schools. The constantly improving quality of medical education in this country has been due in large measure to the change from the haphazard and part-time proprietary trade schools of sixty years ago to the fine cooperative ventures of full-time, part-time, and volunteer faculties in our present schools, combining as they do the best talents of full-time medical teachers with those of able and well motivated medical practitioners in the community who greatly enjoy exercising their Hippocratic obligation to teach and to support medical teaching.

Address delivered to the quarterly staff meeting of the Kauikeo'ani Children's Hospital July 23, 1965, by Dr. C. Henry Kempe, Visiting Professor of Pediatrics. Dr. Kempe is Professor and Chairman of the Department of Pediatrics at the University of Colorado in Denver, Colorado.

Mutual respect, good will, and common ideals should unite the profession. Medical education and the future of medicine are tangibly hurt by those who have no use for a full-time clinical teacher, by those who picture educators as socialistically inclined or worse, and who, by fostering an active spirit of contempt and scorn for all scientific medicine, devalue modern medicine. All physicians can take pride and pleasure in strong, competent, and idealistic medical school faculties. The control of medical school curricula, the selection of faculty members, and the determination of educational philosophies must lie primarily with those charged with the responsibility for the education of our future doctors. Physicians who are able to enjoy physical proximity to medical schools can happily regard their respective clinical departments as allies in the continued mutual quest for constant self-education between colleagues and friends. On the other hand, they can view a skillful and full-time clinical faculty as a naked economic and professional threat. To take the latter course is destructive for all concerned.

What bearing have these remarks on your situation here? Your Children's Hospital decided in May of 1965 to cast its lot with the developing medical school in a growing and increasingly strengthened University of Hawaii. You must do so in collaboration with some general hospital, because a children's hospital, physically separated from a general hospital, cannot long survive as an educational or service force. Preclinical medical students, even in a two-year school, now have intimate contact with a clinical faculty. For example, the University of New Mexico School of Medicine, which is beginning its first class this fall, has already in its two year medical school attracted excellent full-time departments of medicine and surgery and currently is recruiting for full-time chairmen in the other clinical departments. Regardless of when your new two year school becomes a four year school, practitioners can in a major way assist the University and your new Medical School by friendly counsel and by an early willingness to serve on its volunteer clinical staff. Clearly, those practitioners and those hospitals which help a medical school when it is young and relatively weak will have an important voice in advising in its inevitable development towards excellence. Medical schools, and universities, are institutions apart from men. Individuals, unlike institutions, come and go, many of you here will retire from active pediatric practice long before the graduates of a first-rate four year medical school are with you, but the obligation all of us have to serve medical education by helping a developing medical school and by strengthening a growing and proud state university can only be described as enlightened self-interest. The Children's Hospital has been wise to face the reality of its own needs and has become an early and important supporter of this exciting venture in medical education in the State of Hawaii.

Pediatricians have often led the way in looking towards the future of the needs of our young citizens. You are all experts in growth and development; your new school will grow and develop well and happily if you lead your medical community and your fellow citizens in giving an optimal supportive environment to your new faculty and join them in the excitement of continuous and mutual education. The future lies that way. Those who want to stop these inevitable developments may slow them down for a time. Nobody wants anything but an excellent school for this State. With your active enthusiasm and loyalty your new medical school cannot fail. Hawaii's pediatric community cannot render a greater service to Medicine than to fill this leadership role. I wish you well! ■

C. Henry Kempe, M.D.

HAWAII HEALTH FAIR

OCTOBER 9 & 10

Honolulu International Center

This Is What's New!

• **Impairment of liver function** in advanced **heart disease** is due not to cardiac cirrhosis or impairment of blood flow to the liver but to **hepatic congestion.** The standard BSP retention test was abnormal in all patients with advanced heart disease, whereas many of the other liver function tests were normal. The BSP abnormality roughly paralleled the right atrial pressure. (*British Heart J.* [July] 1965.)

• **Xeromammography,** a dry film technique for x-raying the breasts, appears to have some advantages over the usual wet film mammography. Shorter exposure time, one-third as much radiation, and lesions demonstrated as readily as with the film technique are some of the advantages. (*Radiology* [Aug.] 1965.)

• In 1902, a **deep water coral** dredged up from about 600 meters' depth off the island of Kauai was named Madrepora kauaiensis. This proved to be the only known specimen, and was described in detail. A peculiar flower-like lump on the coral was interpreted as another genus of coral growing on the one just described. Now, 50 years later, after more careful scrutiny, it is concluded that M. kauaiensis suffered not from another genus attached to its skeleton, but from a neoplasm. This appears, if right, to be the first instance of a recognized **coral neoplasm.** (*Science* [Apr. 23] 1965.)

• Writing in a dermatological journal, a physician notes that **black dots** may aid in the diagnosis of blastomycosis of the skin. What caused him to flout dermatological propriety by calling black dots "black dots" instead of **melanodermatopathia punctata** is not stated. For students of the dermatological language, the day is saved a few articles later in the same journal when **bullous dyskeratosis follicularis** and **acrokeratosis verruciformis** are reported coexisting in the same patient. (*Arch.* [Aug.] 1965.)

• An Iowa study on the epidemiology of the hayfever-asthma groups of diseases indicates that one of the surest ways for an individual from a nonallergic family to develop an allergy is to **marry someone from an allergic family.** This asthma-hayfever induction by marriage to an allergic spouse holds true in rural as well as in urban areas. (*Am. Rev. Respiratory Dis.* [July] 1965.)

• Conn of Michigan, famed for his original description of hyperaldosteronism due to adrenocortical adenomas, makes the startling estimate that **20 per cent** of patients with **essential hypertension** owe their hypertension to **aldosterone-secreting cortical adenomas.** If this proves to be true, it is of great importance, because removal of the adenomas cures the hypertension. These adenomas have been observed by pathologists for may years and have been regarded as incidental nonfunctioning tumors. They usually do not produce hypokalemia, and could cause hypertension by distortion of the renin-aldosterone system. (*Ann. Int. Med.* [Aug.] 1965.)

• **Dilantin** (diphenylhydantoin) is a most valuable drug in the **treatment of grand mal seizures;** however, evidence indicates that in rare instances Dilantin may actually **induce grand mal seizures** as a toxic manifestation of the drug. This drug encephalopathy is corrected by decreasing or eliminating the Dilantin. (*Neurology* [Aug.] 1965.)

• A careful study of the practices of two **general practitioners** in a Canadian city showed that over 90 per cent of the patients were managed **entirely in their outpatient offices.** One of the two physicians was an active staff member of a teaching hospital and admitted **5.9 per cent** of his patients to the hospital while the other admitted **no** patients to the hospital during the year's study period. (*Canadian Med. Assn. J.* [July 10] 1965.)

• The Cardiac Department of Bedford Hospital, England, has given up that messy saline electrode jelly in favor of new **multipoint electrodes.** A multipoint electrocardiographic electrode consists of a **tin-plated nutmeg grater.** It is speedier, cheaper, and pointier. (*Lancet* [July 3] 1965.)

• A new drug, **Para II Pyrimidine,** after having been found to extend the life span of some animals, has been used in man. In man, it merely **improves hearing, sight, general activity, genital potency, tegumentary conditions, articular functions** and combinations thereof. So far, no known toxic effects. (*Presse Médicale,* Paris [June 19] 1965.) ■

F. I. Gilbert, Jr., M.D.

HAWAII MEDICAL JOURNAL

In Memoriam—Doctors of Hawaii.....

This is the fifty-seventh installment of In Memoriam—Doctors of Hawaii.

Alsoberry Kaumu Hanchett

Alsoberry Kaumu Hanchett was born at Lihue, Kauai, November 16, 1885. He was the son of S. P. and Julia (Palaile) Hanchett. His grandfather, Salem Hanchett, located on Kauai in the early 40's, coming to Hawaii from Massachusetts as captain of a whaling vessel.



DR. HANCHETT

He received his early education at the Kamehameha Schools in Honolulu. Finishing a four-year academic course in three years, he received his A.B. at Harvard University in 1911. He continued his studies in the medical college of the same institution and took his M.D. in 1914, graduating with high honors.

Dr. Hanchett served his internship in Providence, Rhode Island. He became Assistant Superintendent of a hospital there.

In 1916 he returned to Hawaii to enter private practice, specializing in surgery.

Dr. Hanchett and Mary McGuire were married in Honolulu in 1917. The couple had five sons and one daughter, Edwin Lani, William Kaumu, John Ikua, Richard Palea, Harry, and Roberta.

During the First World War he was a major in the Medical Corps and was stationed at Schofield Barracks and Fort Shafter.

In 1918 Dr. Hanchett was made City and County Physician of Honolulu. He held this position until 1930 when ill health forced him to resign.

Hoping to renew his health, he took up a homestead on the island of Molokai.

Dr. Hanchett died October 6, 1932, in Honolulu within a few weeks of his 47th birthday.

He was a member of the Medical Association of Hawaii and of the University Club and civic clubs of Honolulu.

Bertie Mobbs

Bertie Mobbs was born in Lowestoft, England, September 20, 1876, son of James and Eliza Jalland Mobbs. His family brought him to America at the age of five and settled in Florida. Later they moved to Hot Springs, Arkansas.



DR. MOBBS

He was a graduate of St. Louis School of Pharmacy, St. Louis, Missouri, with a Doctor of Pharmacy degree and of the University of Louisville School of Medicine, Louisville, Kentucky, class of 1910.

Before coming to Hawaii, he was in charge of Mountain Valley Sanitarium at Hot Springs, Arkansas.

Dr. Mobbs came to the Islands in 1918 for American Factors, Ltd., and was located at Lahaina, Maui. He was Board of Health physician at Lahaina and at Kula. He also served the British Admiralty as locum tenens on Fanning Island. Before entering private practice in Honolulu, he gave his services to The Queen's Hospital for many months.

A pioneer in modern medical practices in the fields of pediatrics and obstetrics, Dr. Mobbs introduced to the Islands the use of evaporated milk for safety and economy in the feeding of babies. Furthermore, he practiced early ambulation of postobstetrical cases, now common treatment since World War II.

Dr. Mobbs married Miss Violet Hyatt of Windsor, Canada, March 27, 1921, at the Central Union Manse, Honolulu, Territory of Hawaii. Miss Hyatt was a graduate nurse of Grace Hospital, Detroit, Michigan. They had four children: Marguerite Jalland, Victoria Hyatt, James Albert, and Edward Llewellyn.

Dr. Mobbs was a member of the Anglican Church, the Medical Society of Hawaii, the Masons, and the Outrigger Canoe Club.

He died in Honolulu, Territory of Hawaii, April 15, 1947, at the age of 70. ■

Hawaii Academy of General Practice

We wish to acquaint you with a new weekly medical feature on radio KTRG's "Filibuster." Every Wednesday the Hawaii Medical Association has been given five minutes of radio time. The following went out over the airwaves as the second of these five-minute talks:

Good morning. This is Dr. Fred Reppun speaking.

Are you getting a dollar's worth of medical care for every dollar you spend in a doctor's office?

The answer is simple: Get acquainted with a general practitioner. He used to be called the "family doctor." He still is a physician to the entire family, but his name is GP, for General Practitioner. Establish a continuing relationship with one. Find yourself one *before* you get sick. Arrange an appointment to have a complete history and physical examination done by him. While he examines you, you can size him up and determine if you like him. As he gets to know you, inside and out, you may develop a lasting confidence in him as a person with your best interest at heart.

It's true that health insurance today pays many of the family's medical bills in a mechanical and impersonal way. Nevertheless, there are still a number of occasions when you will find the GP a great comfort. He can help you with medical financial problems, as well as medical problems. He can help you decide whether hospitalization is needed or can be avoided. He can advise what specialty to consult, and save you barking up the wrong tree when you try to diagnose your own ailment. There are a number of ways in which the GP works for the betterment of your family's well-being. I'll list some of them briefly:

First is diagnosis. The GP's training is such that he has a wide and comprehensive knowledge of medicine, surgery, and obstetrics. He is not a doctor who knows just a little bit about a lot. A specialist is one who knows a great deal about one subject, but the general practitioner must know quite a bit about the entire field of medicine. He also knows his limitations, and when to refer you to a specialist, or call one in on consultation. The GP's office is the first line of defense against cancer.

The GP is a medical manager. Manage, here, has a doctor meaning. It means to take care of the whole patient, rather than just the disease. Too many people have the idea that the little toe is separate from the heart. Many people wonder why the doctor wants a urine specimen when the complaint is a sore throat. The answer is that unsuspected diabetes may explain why the simple sore throat is persisting.

Health counseling and preventive medicine are the GP's forte. He advises the "old man" to lose weight, to exercise, and to quit smoking, and he explains to him what a "coronary" may mean to the entire family. He lets the "little woman" cry on his shoulder when the kids are just too much for her, plus housework, plus her own pregnancy, plus the "old man" gone out to get drunk. The family's GP knows Junior from birth; Junior can confide in him the worry over teen-age acne.

Rehabilitation is another forte. Once the surgeon has cut out the offending stone or tumor, the patient tends to gravitate back to his family doctor, who then has the slow task of helping the man get back to being the breadwinner again. Or, the GP helps Grandma become less of a burden about the house after she has had her disabling stroke.

Every physical ailment has its mental aspect. Mental illness, so-called, is rarely a true psychosis requiring institutional care. Usually, it is a temporary manifestation of anxiety over a seemingly impossible situation. Even the strongest person has a breaking point. Who better than the GP can understand the relationship between these real symptoms and the family's problems with finances or relatives or a bad work situation? The GP treats the whole family, the whole person.

Other doctors will be talking on this program very soon about some of the various important specialties. Pediatricians restrict their practices to the young, from birth to adulthood. Geriatricians are expert in the diseases of old age. Internists can be divided into heart specialists, gland specialists, and so on. Some surgeons concentrate on brain work, others on the abdomen, still others on the chest, the heart, the nose, or the eye.

There are nearly twenty specialty societies in Hawaii. This shows you how extensive has become the knowledge of the human body and its parts.

It also shows, I think, why the General Practitioner is necessary as a medical coordinator for you and your family. ■

J. I. Frederick Reppun, M.D.
Secretary

HAWAII MEDICAL JOURNAL

Bureau of Medical Economics

The Medical Assistants' Annual Seminar is now behind us, as are the various annual awards for medical assistants, and the medical secretary awards of the year.

Through the sponsorship of the Bureau of Medical Economics, over 160 individual examinations took place to determine the various winners. The knowledge the entrants displayed was surprising, but some answers to the questions were "eyebrow raisers" for the examining panels.

Which brings me to the point: how many doctors take the trouble to instruct their medical assistants in the various phases of their jobs, and how many of these "Girl Fridays" know what is expected of them? Far be it from me to tell you physicians how to run your business, but talks with many of your assistants at the recent Seminar impel me to make some suggestions. First, give your assistant some idea as to the percentage of bad accounts every month. Acquaint her with facts. For instance . . .

THE COLLECTION PROBLEM EVERY DAY

If you see 14 patients a day, you are adding a new collection problem daily to your accounts receivables, and to your assistant's responsibilities. According to a recent survey of 5,000 physicians, one patient in 14 turns out to be a "bad debt." General practitioners have a higher percentage of patients who fail to pay than do the specialists.

Give your assistant figures, not nebulous instructions. If she gets an insight as to averages, it will help her to get a better grip on your accounts, and to form a plan of action.

Point out to her that prompt billing is essential. Although some bad debt loss is inevitable, prompt billing and regular follow-up can help reduce the loss. It has been proved that when statements are mailed as little as three days late, the payments are made not three, but thirty days late. The patient who holds a bill for a month because of a late statement finds it easy to hold a bill again the next month if his budget is tight. It is a well-known fact, that the longer a person holds a bill, the less urgent it becomes. Unfortunately, all too soon it reaches the status of "Some day I am going to pay this when I get a little extra money."

Teach your assistant that she is competing for the doctor's dollar. If she is to serve you in the manner in which you would wish, it would be wise to have her versed in the techniques of collection. Encourage her to inquire from various sources, such as the Bureau of Medical Economics, and suggest to her that she exchange ideas with other medical assistants. There are many bright girls around in other offices who can teach your girl one or two new approaches. Your assistant may very well teach them a new method. This was proved at the recent Seminar when several new ideas were brought to light. Your assistant needs encouragement. Give it to her. Remember that this girl is virtually responsible for how much cash is coming in. You are responsible for the services, but the ultimate cash flow is measured by *her* application to the job. So, help her do it by giving her 100 per cent support. You will find that it does pay off.

INDISPENSABLE MATERIAL

Whenever your assistant sends an account to a collection agency, have her make certain that all material pertaining to the delinquent account is attached, especially promissory notes, credit applications, or agreements. Many physicians have patients sign Patient Information Memos, which give the agency the right to add 25 per cent on your behalf. I would like to stress that this note is only of use to the person to whom the account is assigned. If you send the account for collection to the Bureau of Medical Economics, be sure to attach the note. No collection agency or attorney would demand the extra 25 per cent unless physical proof exists of such a signed note and by physical proof I mean the note in the possession of the collector.

Many doctors' offices are loath to part with such a document because of the information it carries pertaining to the patient. If you need this information, keep a carbon copy, but make sure the original, with the original signature, is sent to the collection agency. Remember, the only agreement a court of law will recognize is the one with the original signature. Nothing else will do!

Finally, be certain that your assistant knows what you want. That girl of whom you think so highly is pretty smart, but she is not a mind reader. Help her to help you. Instruct her correctly, and, in turn, her work will be correct. ■

GABRIEL ROGERS, *Manager*

HAWAII MEDICAL JOURNAL

Maternal Death Study

This Polynesian-Oriental woman, in her early thirties, gravida 3, para 1, abortus 1, was first seen for her final pregnancy during the eighth week of gestation. She had been delivered spontaneously of a full-term infant in her first pregnancy, and one year previous to the present report had sustained a spontaneous abortion at three months' gestation.

PRENATAL COURSE

This mother's normal weight was 60 pounds; weight on her first visit was 63¾ pounds and her blood pressure was 120/70. Significant events in her past medical history included asthma from the age of three, and two episodes of lobar pneumonia. Her height was 4 feet and 11 inches.

On the patient's second prenatal visit during her 12th week of gestation, her weight was 71¼ pounds, blood pressure 90/60, and urine sugar and albumin were negative. On her third visit in the 16th week, her weight was 70¾ pounds, blood pressure 110/50, and urine sugar and albumin were again negative. Hemoglobin on this occasion was 10.4 gm %, blood type O, Rh positive; RBC, 4,130,000; WBC, 9,300, and differential showed 86 segs, 16 lymphocytes, 2 monocytes, and 2 eosinophils.

During her 20th week, the patient's weight was 70 pounds, blood pressure 96/60, and urine albumin and sugar remained negative. At this time, she was placed on one Feosol spansule daily. During her 25th week, she weighed 74½ pounds, blood pressure was 100/60, and urine albumin and sugar remained negative. In the 29th week, her weight was 79 pounds, blood pressure was 110/70, and urine albumin and sugar were negative.

On a visit during the 32nd week of gestation, this patient's weight was 87 pounds, which represented a gain of eight pounds in three weeks. Her blood pressure was 130/88, and urine albumin and sugar remained negative. She was now placed on Enduron 5 mg daily, and was asked to return in one week, at which time her weight was 81 pounds, but blood pressure was 154/90. Slight edema of her feet was noted on this occasion. The patient was instructed to continued Enduron, 5 mgm daily. Urinalysis was not done on this visit.

The patient's last prenatal visit occurred during her 34th week, at which time her weight was 83½ pounds, and blood pressure was 140/90, though urine findings remained negative. Edema of her feet was again noted. Hemoglobin was 12 gm %.

LABOR

Contractions began during the 35th week at 10 P.M., and this patient was admitted to a hospital three hours later, at 1:15 A.M., at which time she was having a bloody show. On admission, her temperature was 97.8; pulse, 68; respirations, 20; blood pressure, 190/100; and weight was 83 pounds. Heart and lungs were within normal limits on physical examination, and pelvic measurements were described as adequate.

The cervix was noted to be dilated 2-3 cm on admission rectal examination, and the presenting part, the vertex, was at +1 station. Fetal heart tones were heard in the left lower quadrant and were of good quality. Contractions were occurring every two to three minutes. The patient was given Numorphan ¾ mgm and Phenergan, 12.5 mgm, I.M. at 2 A.M. At 4:15 A.M., she was taken on a gurney to the delivery room. Now the attending nurse noted that the patient suddenly became very lethargic, with pupils dilated, exhibiting a blank stare, and not responding to stimulation.

DELIVERY

Delivery occurred within a few minutes and was spontaneous, LOA, following a deep episiotomy. Bleeding during delivery was stated to be somewhat more than normal. One ampule of Pitocin was given at 4:22 A.M. with delivery of the infant. Placenta was expelled at 4:25 A.M. and at 5:00 A.M. another ampule of Pitocin was given.

During delivery, the patient's respirations were slightly irregular, and oxygen was administered. Her pulse varied from 100 to 110 and blood pressure was recorded at 130/90. Her pupils were dilated bilaterally, and mucus accumulated in the trachea and had to be aspirated. The patient remained comatose, "bizarre motions" of both upper extremities were noted, and she expired shortly thereafter. Permission for autopsy was obtained.

AUTOPSY FINDINGS

When the skull was opened, blood was found under tension beneath the dura. A puncture in the

continued page 56

HAWAII MEDICAL JOURNAL

New Members



Gabriel W. C. Ma, M.D.
1481 South King Street, Suite 200
Honolulu, Hawaii 96814
ORTHOPEDIC SURGERY
University of Sydney, 1958
N.S.W., Australia
Internship—Lewisham General Hospital 1958-59
Sydney, Australia
Residency—The Queen's Hospital, 1960-61
Lahey Orthopedic Program, 1961-64



Maurice Howell, M.D.
Diamond Head Mental Health Center
550 Makapuu Avenue
Honolulu, Hawaii 96816
PSYCHIATRY
State University of New York, 1958
Internship—Kings Co. Hospital, 1958-59
Brooklyn, N. Y.
Residency—Kings Co. Hospital, 1959-62
Brooklyn, N. Y.



Gerald Dale Faulkner, M.D.
1441 Kapiolani Blvd., Suite 612
Honolulu, Hawaii 96814
OPHTHALMOLOGY
Medical College of Alabama, 1956
Internship—U. S. Naval Hospital, 1956-57
Jacksonville, Fla.
Residency—U. S. Naval Hospital, 1957-60
Bethesda, Maryland



Sidney L. DeBriere, M.D.
Box 606
Hilo, Hawaii 96720
PEDIATRICS
University of Colorado, 1952
Internship—Presbyterian Hospital, 1952-1953—Denver
Residency—Children's Hospital, 1953-1955—Denver



Murray Stuart Berger, M.D.
1040 South King Street, Suite 312
Honolulu, Hawaii 96814
OBSTETRICS-GYNECOLOGY
University of Chicago, 1957
Internship—Wadsworth Veterans Administration Hospital, 1957-58
Los Angeles, California
Residency—Kaiser Foundation Hospital, 1958-61
Los Angeles, California

County Society News

Honolulu

Two new members, Noboru Akagi and Wallis L. Craddock, were introduced at the June 1 meeting. The featured speaker, C. S. Chung, Ph.D., spoke on "Computer Applications in Medicine." The President announced that Mayor Blaisdell had appointed Drs. Varian Sloan and George Mills to the City and County Committee on Aging. Mr. Gabriel Rogers, Manager of the BME, asked the doctors to make certain their medical assistants attended the Medical Assistants Seminar.

Dr. B. A. Richardson advised that the Board of Censors had recommended eliminating specialty listings in the yellow pages of the telephone book. The Board of Governors, however, thought it would be best to bring this matter to the membership. Two proposals were presented: (1) Approve the Board of Censors recommendation, or (2) enforce the code strictly either by censure or fine. It was voted that a request be made of each individual doctor to follow the code and that any violation of the code or noncompliance with the request be published and circulated to the membership. Violators will be discussed individually at membership meetings.

Dr. Poulson announced that the Hawaii RVS would be out in six weeks to two months, and the next step as far as negotiations with HMSA are concerned is to propose that the individual agreements terminate when the master contract with the Honolulu County Medical Society does. The President advised that the Society had received 364 signed statements to effect individual contract termination with the master contract and allowing the Society to be agent for each doctor in this matter.

Kauai

The July 6 meeting was held in the G. N. Wilcox Memorial Hospital's staff dining room. Dr. Wallis reported on the activities of the HMA's Medical Care Plans and Fees Committee. A letter from HMA with reference to termination of individual contracts was read. It was voted to advise the HMA that the KCMS members voted to retain their individual contracts with HMSA and therefore do not authorize the HMA to negotiate in their behalf.

It was noted that to date no action had been taken by the Governor on the Society's recommendation that Dr. K. K. Fujii replace Dr. P. M. Cockett on the Board of Medical Examiners. Dr. Cockett's term has expired.

It was voted that the President attend HMA Council meetings whenever the elected Councilor is unable to be present. It was also voted that the members of the Society refrain from adding the excise tax to their billings. It was voted to approve the President's recommendation that scientific and business meetings be alternated.

A letter of resignation from Dr. James R. Warner, who is leaving the State, was accepted. It was announced that Dr. Otto K. Eichman had begun his residence training in psychiatry in California and will be carried as a dues-waived member. Dr. John Morris, radiologist at Wilcox Memorial Hospital, was accepted as a new member. ■

Hawaii Health Fair Participants

Aetna Life Insurance Company
Aloha Surgical Supply
American Cancer Society, Hawaii Division, Inc.
American College of Physicians, Hawaii Chapter
American College of Surgeons, Hawaii Chapter
American Physical Therapy Association
American National Red Cross, Hawaii State Chapter
Blood Bank of Hawaii
Boy Scouts of America
College of Nursing, University of Hawaii
Commission on Aging
Department of Health, State of Hawaii
Department of Practical Nursing, Kapiolani Technical School
Department of Social Services
Department of Technical Nursing, University of Hawaii
Foremost Dairies Hawaii, Ltd.
Future Nurses Clubs of Hawaii
Hawaii Ambulance Service
Hawaii Association to Help Retarded Children
Hawaii Committee on Alcoholism
Hawaii Dermatological Society
Hawaii Eye, Ear, Nose, and Throat Society
Hawaii Heart Association
Hawaii League for Nursing, Inc.
Hawaii Medical Library
Hawaii Nurses Association
Hawaii Pharmaceutical Association
Hawaii Society of Internal Medicine
Hawaii Society of Medical Technologists
Hawaii State Dental Association
Hawaii Urological Association
Hawaiian Electric Company, Inc.
Hawaiian Surgical Association
*Honolulu Chamber of Commerce
Honolulu General Surgical Society
Honolulu Pediatric Society
Honolulu Police Department, Traffic Division
Hospital Association of Hawaii
*Meadow Gold Dairies–Hawaii, Ltd.
Medical Service Representatives of Hawaii
Mental Health Association of Hawaii
Muscular Dystrophy Association of Hawaii
National Aeronautics and Space Administration
National Association of Social Workers
National Cystic Fibrosis Research Foundation, Hawaii Chapter
National Foundation–March of Dimes, Honolulu Chapter
National Society for Crippled Children and Adults
Oahu TB and Health Association
Occupational Therapy Association of Hawaii
Pacific Biomedical Research Center
Queen's Hospital, The
Queen's Hospital School of Nursing, The
Radiological Society of Hawaii
Rehabilitation Center of Hawaii
Social Security Administration
St. Francis Hospital
Tripler Hospital
United Cerebral Palsy Association
University of Hawaii
Volunteer Service Bureau
Windward Theatre Guild
Woman's Auxiliary, Hawaii Medical Association
Woman's Auxiliary, Honolulu County Medical Society
Young Women's Christian Association

* Financial assistance.

Notes and News

Professional Moves

Summer always brings a flurry of activity in our medical community. The Straub Clinic added ophthalmologist **Shigemi Sugiki,** psychiatrist **Edwin Gramlich,** and anesthesiologist **Arthur Sprague** to their expanding staff. Surgeons continue to swell their own ranks; **Manuel Abundo,** a product of our integrated surgical program, joined the Ewa Clinic and **Donald Peck** opened at 1441 Kapiolani Blvd. Psychiatrist **Ed Furukawa** moved to larger quarters at 110 University Ave. and **Robert Kemble** also moved to the same address. **Kenneth Christensen** opened at the Kailua Shopping Center, and **Michael Hase** announced his association with the Wahiawa Clinic. Charming **Felicisima Ylarde,** pediatrician, joined the Philippine-American Medical Associates at 72 So. Kukui St. Another pediatrician, **John Clarkin,** took over **Louise Childs'** practice in Aina Haina while Louise left for the University of California at Berkeley to pursue a public health program under a fellowship offered by the U. S. Health, Education & Welfare Department's Children's Bureau.

The Queen's Hospital named **Drake Will** Director of Clinical Laboratories and Pathology and **David Katz** Associate Radiologist. Both were associated with the joint U.S.-Japan Atomic Bomb Casualty Commission in Japan.

We were confused by the arrival of two **John Morrises** to the islands in July. John Francis Morris joined the Maui Medical Group as internist and cardiologist, while the other John Morris joined the G. N. Wilcox Memorial Hospital on Kauai as their new radiologist. Fortunately, they are located on different islands; we would hate to see a working radiologist awakened at midnight to treat a heart attack.

Visiting Physicians

On a beautiful July Sunday, in the interest of self-improvement, we reluctantly attended the Symposium on Clinical Medicine and Surgery with 200 others. **K. S. Tom,** resplendent in maroon bow tie, gave out with an oratorical harangue as he introduced the morning speakers. **Joseph Rupp,** Associate Professor of Clinical Medicine at Jefferson Medical College (who vaguely resembles Wendell Wilkie in speech and appearance), spoke on "Glands, Not to Monkey With." We enjoyed **Joe Rupp's** advice on weight reduction, viz., "Stay away from liquor and best-selling books about weight control." Weighing 260 pounds himself, he recommends, "Cut out alcohol, and exercise in moderation. If those things don't appeal to you, be content to put on weight. After all in some cultures, obesity is a mark of beauty. And until the last couple of generations in the Western world, a fat man has been the symbol of success."

Robert Kistner, Associate Professor of Clinical Medicine at Jefferson Medical College, spoke on "Therapeutic Use of Progestins in Carcinoma" and "Chemotherapeutic Application of Sex Hormones." Laconic **Ben Tom,** hard working program chairman for the symposium, presided at the luncheon and promised there would be no speeches, and, much to our pleasant surprise, there were none. Methodical **Winfred Lee** moderated the usually soporific postluncheon sessions which were spiced by **Joe Rupp's** "The Problem of Delayed and Precocious Puberty in the Male." **Bentley Colcock,** Lahey Clinic surgeon, talked on "Extrabiliary Obstructions." He had forgotten his slides and admitted he was in a tough spot . . . "No slides, and following Dr. Rupp's talk on sex. . . ." We wish to thank the Lederle Laboratories for making these speakers available and for providing both lunch and delightful post-session refreshments.

With the recent rubella epidemic in Hawaii, the session on "Rubella and Fetal Malformations" co-sponsored by the Birth Defects Clinic at Children's Hospital and the Honolulu County Medical Society was well attended. **Donald Char** moderated a panel consisting of **Sam Buist; Henry Kempe,** Professor of Pediatrics at University of Colorado; **Leon Rosen,** and **Sorrell Waxman.**

Henry Kempe and his quiet humor attracted standing-room-only crowds at Children's Hospital. He boosted measles vaccination and decried smallpox vaccinations. We gathered up some Kempe Pearls: How to cope with

ADOLPH GEORGE SCHNACK
1887-1964

Born in Honolulu September 23, 1887, and a diagnostician and roentgenologist in this city from 1920 until his retirement in 1948, Adolph George Schnack died at his retirement home in Riverside, California, February 19, 1964.

The uncle of psychiatrist George F. Schnack, the senior Dr. Schnack was the son of John Henry and Doris (Brandt) Schnack. He graduated from Punahou in 1906, and received a B.A. from Stanford University in 1910, an M.A. from Yale in 1911 and his M.D. from Johns Hopkins School of Medicine, 1915. His internship was at Massachusetts General Hospital, 1915-16, and he subsequently served a few months at Boston Infant's Hospital, before entering the U. S. Army Medical Corps, 1917-20.

During his tenure in Honolulu, Dr. Schnack was associated at various times with The Queen's Hospital, Shriners', St. Francis, and Kuakini as roentgenologist. He was diplomate of the National Board of Medical Examiners, and fellow of the American Colleges of Physicians and of Radiology, as well as member of the Honolulu County Medical Society, the Hawaii Medical Association, and the American Medical Association.

His wife was the former Adele Field Sherman of Cambridge, Mass., and this couple had two sons, Theodore Sherman and Robert Sherman, the latter dying in childhood.

Dr. Schnack's major interest, apart from his work and family, was in raising and racing thoroughbred horses, both in Honolulu and later in California.

enamored patients, especially adolescents: have the patient take 20 deep breaths while pretending to listen with the stethoscope. The patient should be less of a problem thereafter because she will be only concerned with survival, having hyperventilated. Some degree of strife is essential to life (with reference to teenage problems). Remain calm in an argument; one cannot argue with oneself. Regarding the use of IV gamma globulin: It gives patients and doctors syncope. Give it with a prayer in your heart.

The surgeons listened faithfully to soft-spoken humorist, **James Hardy,** Chief of Surgery at University of Mississippi, who was the Visiting Professor under the integrated surgical program.

Elected, Appointed and Honored

We congratulate **Sam Allison,** our past prexy, on being elected a Fellow of the American College of Physicians, and **Ed Chesne** and **Hing H. Chung** on being elected Associates. We also congratulate **Shigeo Natori** and **Isami Umaki** on becoming Fellows-elect of the American College of Obstetricians and Gynecologists.

The Hawaii Society of Internal Medicine elected affable **Warren Wong** President, **Frank Bruce** Vice President, **Thomas Lau,** Secretary-Treasurer, and **Noboru Oishi,** Councillor. Amiable **Chew Mung Lum** was selected Medicine's Father of the Year and **Richard Sakimoto,** Class of '30, was awarded the Distinguished Service Certificate at the U. of H. Alumni Association dinner at the Kaimana Hotel. Deserving **Scott Brainard** was presented the Hawaii Heart Association award for "distinguished achievement in the field of cardiovascular medicine" at their annual meeting. (Scott is credited with over 125 successful open-heart cases; we well remember how frustrated Scott was when dog after dog died in the old pathology lab at Queen's, and how jubilant he was when the first dog survived.) Elected at the meeting were **Alfred S. Hartwell,** President for 1965-66, and **Unoji Goto,** President-elect for 1966-67.

Retired HMA member, **Paul Withington,** 1905 graduate of Punahou and one of Hawaii's all-time athletic greats, was presented with the "O in Life" award at the annual Punahou School alumni reunion. He earned All-America football honors at Harvard and was an outstanding freestyle swimmer and top oarsman at Harvard. **George Mills** continues his success story by receiving the Oahu Health Council service award at the annual luncheon meeting of the Oahu Health Council for outstanding volunteer service to the community. **Toru "Blue" Nishigaya** was named Chairman of the newly appointed Advisory Council on Hospitals and Medical Facilities. **Kenji Goto** (Kuakini administrator) was named Vice Chairman.

Among the 100 most outstanding graduates of McKinley High School at its recent centennial were listed the following physicians: **Kiyoshi Hosoi, Joseph Nishimoto, Richard You, Richard Ho, James Kuninobu, Kazuo Miyamoto, Roy Tanouye,** and **Richard Ando. Charley Judd** is President of the Hawaiian Mission Children's Society which recently dedicated the Kawaiahao Church as a registered National Historic Landmark.

Sportsmen

Turf Diggers: At the Ala Wai, **Paul "Tiger" Tamura** won the July-August B flight trophy. Perennial winner **Ike Nadamoto** tied for first place in A flight only to be nosed out on the 6th net score. In deference to **Frank "Juicer" Fukunaga,** we shall not mention how he fared.

At the Oahu Country Club, **Fred Warshauer** and **Richard Kelley** tied for first place in a match versus par tournament in June.

At the Waialae Country Club, smooth-swinging **Kiku Kuramoto** scored 74-10-64 to win the June ace. In July, **Allen Richardson** and **Richard Chun** tied in B flight. Richard also had 39 points in B flight stableford and **Sam Yee** and Richard took team stableford with 78 points. The **A. S. Hartwells** shared first place with the **Paul Gebauers** in mixed team best ball. For August, **Sam Yee** and partner scored 73 points to win team stableford while **Roy Tanoue** with 39 points won the A flight honors. **Kiku Kuramoto** and partner tied with another team for team honors.

On Kauai, **Sam Wallis** won the Aole Makana golf club match play championship in June, and the two day Junior Benefit Sweeper on August 4. He and **Kenneth Fujii** were in a five way tie for third place in the Junior Sweeper on August 11. They call this nine hadicapper "Tiger" Wallis on the Garden Isle.

Tennis: Ambling **Yutaka Yoshida** defeated tough **Leabert Fernandez** only to be ousted in the semifinals at the men's 45 division of the 16th Sectional Tennis Championships at the Waikiki Racquet Club. We welcome two Class A players to the local tennis group: **Gabe Ma,** ex-squash player, and **Mitsu Yokoyama,** former NIH tennis team captain.

Fishermen: Intrepid fisherman **Kaoru Sasaki** ventures out of Kaneohe Bay on his 24-foot sampan and regularly hauls in a dozen mahimahi and aku. The story is told how three years ago, "Sasa" in a smaller craft ventured out despite the small craft warning and had to swim in

continued page 60

DOROTHY HOPE KEMP
1907-1964

Dr. Dorothy Kemp, who expired at The Queen's Hospital June 17, 1964, at the age of 56, will be remembered by her medical colleagues in Hawaii as County Health Officer for Kauai from 1949-51 and 1952-53, Assistant Chief of the Bureau of Venereal Disease and Cancer Control in 1953, and Director of the Department of Health's Division of Hospitals and Medical Care until her retirement in 1959. She had earlier served a locum tenens with Dr. John Devereux.

Dr. Kemp was formerly a member of the Honolulu County Medical Society, the Hawaii Medical Association, and the American Medical Association, as well as the Hawaii and Western branches of the American Public Health Association and the Association of Western Hospitals. Among her avocations was her love for animals, and she belonged to the Kerry Blue Club of Hawaii.

A 1934 graduate of the University of California School of Medicine, Dr. Kemp took her internship and residency at Children's Hospital, San Francisco, 1934-36, and practiced in San Francisco until 1948 when she returned to Honolulu, her childhood home.

Dorothy was born in Austin, Texas, August 25, 1907, the daughter of Judge Samuel B. and May Hope Kemp, and came first to Hawaii in 1915 with her parents. Judge Kemp was at one time Chief Justice of the Supreme Court of Hawaii. Dorothy was educated at Punahou School, University of Texas, and the University of Hawaii, before entering medical school. She also attained a Master's degree in Public Health, Berkeley, California, 1951-52.

HAWAII MEDICAL JOURNAL

Book Reviews

Basic Clinical Parasitology, 2d Ed.

By Harold W. Brown, M.D., and David L. Belding, M.D., 318 pp., $6.95, Appleton-Century-Crofts, 1964.

THIS CONCISE, authoritative, and up-to-date summary of knowledge concerning the protozoa, helminths, and arthropods which affect man, with emphasis on the medical aspects, should be especially useful for students or others who desire a general review of the subject. Data on the parasites themselves are restricted to those necessary for diagnosis. There are no references to the literature.

LEON ROSEN, M.D., Dr.P.H.

Massage Principles and Techniques

By Gertrude Beard, R.N., R.P.T., and Elizabeth C. Wood, A.M., M.S., R.P.T., 163 pp., $6.00, W. B. Saunders Company, 1964.

THIS BOOK is a short but comprehensive discussion of the basic principles relating to the administration of massage treatment and a description of some accepted techniques.

The subject matter is well presented and should be an effective review for the physical therapist. The section on basic techniques is easy to follow and well illustrated for both local and general massage techniques. To help in the understanding of the various massage procedures, the authors present an introductory section on terminology and historical background. The section of the effects of massage is particularly well organized. The authors have put forth a great deal of effort to make the reader aware of what is known, and what is unknown, and whether this knowledge is based on clinical experience, controlled laboratory research, or knowledge of anatomy and physiology. This section would be of particular interest to the physician as well as the physical therapist.

This book has a bibliography that should be of value to anyone wishing to study the subject more thoroughly.

FRANCES KNOWLTON, P.T.

★ Transference, Its Structure and Function in Psychoanalytic Therapy, 2d Ed.

By Benjamin Wolstein, Ph.D., 272 pp., $7.75, Grune & Stratton, 1964.

THIS IS A BOOK worth reading. The author emphasizes that the identification of psychoanalysis with a primary trauma in infancy is not a wholesome one, that psychotherapy must be oriented to the future as well as to the past. The nature of the transference, the attachment to the therapist, and the distortions of that relationship may be much more important than the theoretic structure and formulations of psychoanalysis itself. He points out that the transference or attachment to the therapist is the central feature of psychotherapy.

All psychotherapists will appreciate this viewpoint since essentially it means that all psychotherapy is grounded in a relationship of patient to doctor and it will not matter so much what the particular orientation of the doctor may be, but the wisdom with which the doctor manipulates that attachment.

This book is recommended to all workers in the field of psychotherapy.

J. ROBERT JACOBSON, M.D.

★ means highly recommended.

Freedom to Experience

By Benjamin Wolstein, Ph.D., 292 pp., $8.50, Grune & Stratton, 1964.

THE SUBTITLE OF this book—"A Study of Psychological Change from a Psychoanalytic Point of View"—is more indicative of the actual contents than is the title. However, the author's attempt to establish this sweeping study in so small a volume makes it readable only for the psychological sophisticate.

The presentation of multi-psychological disciplines as being "psychoanalytical," though logical and concise, reveals a tendency to put into the words of Freud meanings with which I am sure classical analysts would frequently disagree.

Nevertheless, this book is well worth reading for the psychiatrically initiated, if only to gather concepts of Neo-Freudianism which are not based on polemic and rigid classification alone.

FREDERICK E. POPOFF, M.D.

Diagnostic Medical Mycology

By Leanor D. Haley, Ph.D., 204 pp., $4.95, Appleton-Century-Crofts, 1964.

THIS IS A PRACTICAL, technical manual on medical mycology.

PAUL TAMURA, M.D.

Clinical Scalar Electrocardiology, 5th Ed.

By Bernard S. Lipman, A.B., M.D., F.A.C.P., F.A.C.C., and Edward Massie, A.B., M.D., F.A.C.P., F.A.C.C., 634 pp., $11.00, Year Book Medical Publishers, 1965.

IN RECENT YEARS, text books on electrocardiography have changed from simplified primers for the beginner to more complex editions. This book is no exception. The authors of this text combined the following three main methods of interpretations: (1) Wilson's concept of projection of regional potential variation. (2) Grant's Vector electrocardiographic method, and (3) Sodi-Pallares' panoramic deductive method.

Students sincerely interested in the field of electrocardiography and cardiologist will find that this book will help them "understand," instead of only "memorizing," patterns of electrocardiograms.

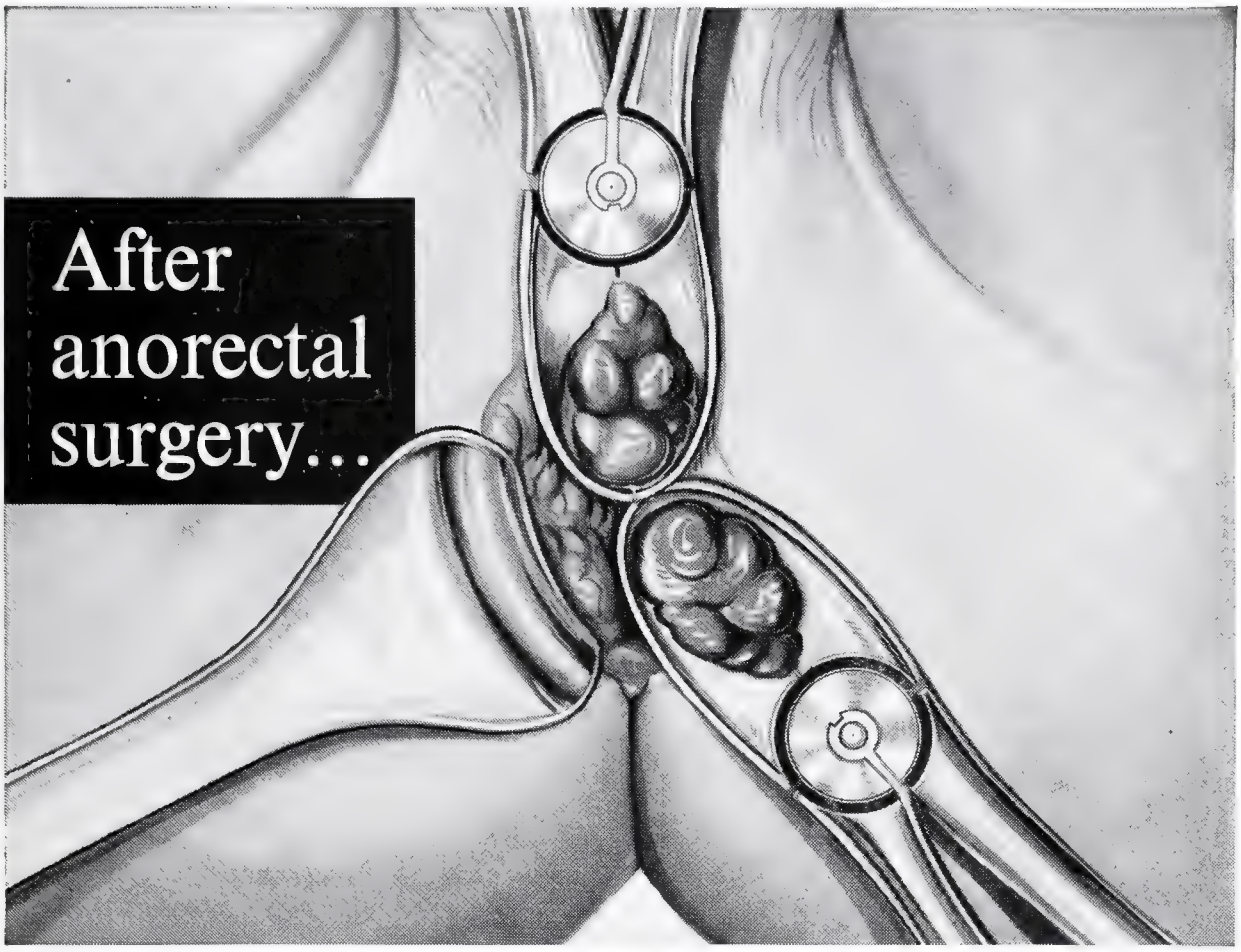
C. S. WAKAI, M.D.

★Pain in the Chest

By William H. Wehrmacher, M.D., F.A.C.P., F.A.C.C., 403 pp., $14.00, Charles C. Thomas, 1964.

IN THE PRACTICE OF MEDICINE, pain in the chest is a frequent and important symptom. This book brings into focus the noncardiac causes of chest pain by systematically including these causes as the author covers the subject, starting from the chest wall and progressing to the thoracic and abdominal viscera. The material is clinically oriented and documented frequently by statistics and references. The intent of the author is admirably achieved by careful attention to differential features of each disease with correspondingly less emphasis on etiol-

continued page 67



METAMUCIL®

brand of psyllium hydrophilic mucilloid

softens...protects

THE PROBLEM of physical irritation of raw, postsurgical anorectal areas is frequently urgent. A well-verified satisfactory solution to it may be found in the bland, easily compressible "smoothage" of Metamucil.

The natural vegetable bulk of Metamucil softens intestinal contents and provides a soothing demulcent effect that protects denuded mucosal surfaces.

Metamucil prevents strain and traumatizing evacuations from constipation or cathartics and encourages the restoration of normal colonic function.

Average Adult Dosage: One rounded teaspoonful of Metamucil (or one packet of Instant Mix Metamucil) in a glass of cool liquid one to three times daily.
Metamucil is available as Metamucil powder in containers of 4, 8 and 16 ounces and as flavored Instant Mix Metamucil in cartons containing 16 and 30 single-dose packets.

SEARLE *Research in the Service of Medicine*

Maternal Death Study *continued from 49*

dura caused blood to spurt 4-5 inches. The brain stem, upon examination, appeared to be almost completely destroyed and was surrounded by clotted blood. In the right cerebral hemisphere was found a large hematoma which extended into the third and fourth ventricles. Other findings included the heart, weighing 255 gm and grossly normal; numerous adhesions on the posterior aspect of the right lung, which weighed 245 gm, and on the chest wall; numerous hemorrhagic spots over the pleura of both lungs; left lung, weighing 225 gm; liver, 1,075 gm, with hemorrhagic spots over the surface; gallbladder, biliary tree, and gastro-intestinal tract within normal limits; right kidney, weighing 120 gm, with hydroureter and dilatation of the renal pelvis (thought to be due to pressure from the pregnant uterus); left kidney, 125 gm, not otherwise described; adrenals, weighing less than 1 gm; and uterus, grossly normal.

Microscopic findings indicated edema of the brain, focal necrosis of adrenal cells consistent with shock, focal necrosis of liver cells and acute hepatitis consistent with pre-eclamptic toxemia of pregnancy, and chronic pneumonitis.

Causes of Death. 1. Acute cerebral hemorrhage during the second stage of labor; 2. Focal adrenal necrosis, related to steroid therapy for chronic severe asthma.

CLASSIFICATION

This death was determined to be an indirectly-obstetrical death, and practically preventable. The factor of responsibility was alleged to be the attending physician.

Conclusions and Recommendations:

Examination of this patient's blood was not carried out until her 16th week of pregnancy and third prenatal visit, at which time she was found to be anemic; still, treatment of the anemia was not begun for another month. This was ruled to be an unjustifiably long interval by the Committee. Furthermore, four months passed before a repeat hemoglobin was obtained to evaluate the iron therapy. This interval, too, was adjudged to be too long. The Committee's tenet that routine laboratory examinations be obtained early in pregnancy was reemphasized.

When the patient returned for her prenatal visit during the 32nd week of gestation, she was found to have gained eight pounds in three weeks and blood pressure was elevated to 130/88 from her previous level of 110/70. The Committee members agreed that treating the patient with a diuretic such as Enduron was appropriate at this time. On her return visit in a week, however, the patient's blood pressure had risen to 154/90, in spite of her having lost six pounds during that week. This rise in blood pressure was somewhat alarming to the obstetrician members of the Committee and they stated that intensive measures to treat this condition should have been instituted then. Even though the patient's urine had not shown albumin on any of her visits, many Committee members felt that perhaps she should have been hospitalized at that time and treated intensively.

The patient was admitted to the hospital in labor during the 35th week of her pregnancy. On admission, her blood pressure was found to be 190/100. Following this initial reading, no other records of blood pressure readings are available until the patient was taken to the delivery room in coma. The Committee members feel that if this patient had been treated intensively from the time of admission to delivery, with respect to hypertension, perhaps the cerebral hemorrhage might not have occurred. ■

THE MATERNAL AND PERINATAL MORTALITY STUDY COMMITTEE

YOU CAN
Rent
EVERYTHING FOR THE SICKROOM
THROUGH
The Only Complete Line of Sickroom Rental Equipment in Hawaii

INVALID LIFTERS
HOSPITAL BEDS
WHEEL CHAIRS
WALKERS
CRUTCHES
COMMODES

ALOHA RENT-ALLS
DAY, WEEK, OR MONTH—WE DELIVER

WINDWARD—767 KAILUA RD.—PH. 250-885

What's the difference between thromboplastins?

REPRODUCIBILITY

in both the normal and the therapeutic range

To be reproducible in the prothrombin time test the thromboplastin must be...

Precontrolled • Standardized • Stable

HOW DOES YOUR THROMBOPLASTIN RATE?

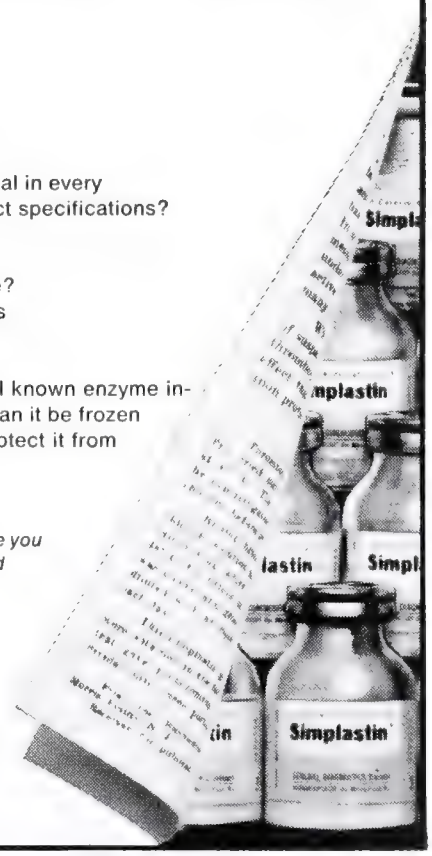
Are tissue source and conditions of extraction identical in every lot prepared? Do particle size and number meet exact specifications? Does every lot have optimal ionic strength, pH?

Does it cause normal plasma to clot in a specified time? Will the prothrombin times of anticoagulated plasmas follow a predictable curve?

Is it free of phenol, formaldehyde or sodium azide (all known enzyme inhibitors that may falsely extend prothrombin time)? Can it be frozen without loss of activity? Is packaging adequate to protect it from deterioration due to heat and humidity?

If you answered "no" to any one of these questions, it's time you compared your thromboplastin with others. If you answered "yes" to all these questions you're using

Simplastin® *It's incomparable.*



GENERAL DIAGNOSTICS DIVISION
WARNER-CHILCOTT DIV. MORRIS PLAINS, N.J.

HAWAII TECHNOLOGISTS' BULLETIN

Official Publication of the Hawaii Society of Medical Technologists

Editor: STELLA YOSHIDA, U. S. Army Tripler Hospital

Report on the 1965 ASMT Convention

The 1965 meeting of the American Society of Medical Technologists was held June 19-26 in Cincinnati, Ohio. It was my privilege to represent HSMT at the meeting. Shortly after my return, I reported to the Board of Directors, to the membership, and to the Committee Chairmen who would be coordinating their state activities with those of the national organization.

To repeat my report here would be rehashing ancient history. My written report is available for anyone who hasn't seen it and wants to; I'll use this month's space to mention some of ASMT's activities which are directed toward the future and which will have some effect on us.

GREATER AUTONOMY

There were a number of actions by the House of Delegates which revealed the importance our parent organization is attaching to efforts to obtain greater autonomy for medical technologists. At a February meeting of the ASCP-ASMT Medical Technology Committee, the ASMT representatives, as requested by the Board of Directors, discussed the Society's desire for equal representation (now five pathologists, four technologists) on the Board of Registry and Board of Approved Schools. ASCP members reported to their Board of Directors in April and the matter has been referred to a study committee. Technologists are intent on obtaining greater responsibility for regulating their own profession so whether or not this request is granted, refused, or committed to oblivion, we can expect to hear more of it.

Another item of business that reflected ASMT's look to the future was passage by the House of Delegates of a resolution presented by the Washington State Society. I hope that one of our national publications will print the resolution so that you can read it in its entirety. In essence, it instructs "the Board of Directors of ASMT to meet with the proper medical group to request that the AMA Board of Hospital Accreditation give serious consideration to adding to their criteria for accreditation of a hospital the employment of full-time ASCP registered medical technologists. . . ." and suggests that the number of technologists be determined by the number of hospital beds or by the number of persons employed in the laboratory.

The resolution goes further and requests similar requirements for reference laboratories which do work for hospital laboratories.

CONTINUING EDUCATION

A great deal of emphasis was placed on education—particularly the continuing education of the graduate technologist. The keynote address was delivered at the opening session by Leanor Haley, Ph.D., MT(ASCP). Dr. Haley, in her talk "Status or Status Quo," pointed out that standing still is tantamount to moving backward and that only by continuous self-development can the medical technologist hope to maintain his hard-won status and move on to a position of greater responsibility and professional recognition in the medical world.

The final day of the convention was devoted entirely to a workshop—a fitting climax to a meeting that stressed education from start to finish.

Our feeling that a well-defined, long-range educational program is one of HSMT's most important responsibilities was underscored by events and comments of the Cincinnati meeting. Our Education Committee is busy and will be reporting frequently.

Attendance at a national convention is a stimulating experience because everyone seems to be so very interested in Medical Technology. Then you realize that that is precisely why they all happen to be in one place at one time. Apparently we all have a "back home" situation that is somewhat less stimulating—the challenge of the unaffiliated, disinterested, apathetic, and occasionally hostile technologists who have a tendency to criticize from the outside.

One of the best ways to appreciate the importance to us of ASMT, and to feel a little of the professional pride that professional technologists deserve to feel, is to attend a national meeting. I hope that more and more HSMT members will try it. I'm grateful for the opportunity which was given me.

EDITH ECKSTEIN, MT(ASCP)
President

HSMT Officers, 1965-1966

President: Edith Eckstein, MT(ASCP), Tripler Army Medical Center
President-elect: Elaine Chang, MT(ASCP), Board of Agriculture and Forestry
Recording Secretary: Gretchen Asato, MT(ASCP), Hawaii State Hospital
Corresponding Secretary: James Yano, MT(ASCP), Kaiser Foundation Hospital
Treasurer: Juan Macanas, MT(ASCP), The Queen's Hospital
Board of Directors: Kenneth Sato, MT(ASCP), Past President, Pathology Associates Medical Laboratories; Alice Tonchen, MT(ASCP); Kaname Saito, MT(ASCP), Straub Clinic

Standing Committee Chairmen

Civil Defense: Leslie Nakashima, MT(ASCP), Dickson-Bell Medical Center
Constitution & Bylaws: Ethel Nishibata, MT(ASCP), Leahi Hospital
Convention: Takeyo Saito, MT(ASCP), Tripler U. S. Army General Hospital; Gloria Dela Cruz, MT(ASCP), Pathology Associates Medical Laboratories
Education: Kenneth Sato, MT(ASCP), Pathology Associates Medical Laboratories; Jean Nishimura, MT(ASCP), Straub Clinic
Finance: Gilbert Gima, MT(ASCP), Wahiawa General Hospital
Legislation: Ethel Nishibata, MT(ASCP), Leahi Hospital
Membership: Ann Stegmaier, MT(ASCP), Blood Bank of Hawaii
Nominations & Elections: Lillian Tanaka, MT(ASCP), Tripler U. S. Army General Hospital
Program: Elaine Chang, MT(ASCP), Board of Agriculture and Forestry
Publications & Public Relations: Stella Yoshida, MT(ASCP), Tripler U. S. Army General Hospital; Vicky Nojima, MT(ASCP), St. Francis Hospital
Recruitment: Alice Tonchen, MT(ASCP)
Scholarship: Ronald Miyakawa, MT(ASCP), Waimano Home
Teaching Supervisor: Louise Wulff, MT(ASCP), University of Hawaii

HSMT Scholarship

The Hawaii Society of Medical Technology Scholarship has been officially accepted by the University of Hawaii. The recipient will be selected by the University of Hawaii Scholarship Committee. This $250.00 annual scholarship will be awarded to a senior medical technology student interning in the State of Hawaii.

Presentation of the first award will be made in the fall semester of 1966 and each year thereafter.

This scholarship is made possible by our annual See's Candy Sale each December—Let us strive to make this coming candy sale a huge success.

Snoopie's Corner

Joyce Mizokawa is going on a world tour in September. **Ann Stegmaier** is back at the Blood Bank of Hawaii. **Stella Yoshida** is leaving in September for a vacation to the Orient. **Alice Tonchen** has resigned from St. Francis Hospital. **Beryl Aragaki** has left the Pathology Associates Medical Laboratories and is now working at Kuakini Hospital. ■

Visit the Med Tech Booth
at the
HAWAII HEALTH FAIR
OCTOBER 9 & 10
Honolulu International Center

over a mile when his boat capsized. He was so scared that he forgot to take his clothes and shoes off for the swim. **Sam Waxman** appears to be a newcomer to the deep-sea fishing scene. **Jim Cherry** captained the Hawaii Big Game Fishing Club team No. 7 and caught a 250-lb. marlin in the recent Billfish Tournament at Kona. (Jim, it appears, has to replace a few broken golf clubs before he can resume golfing, and in the meantime has taken up fishing.) **Wayne Wong** landed a 20-lb. ono, plus several small ahi and kawakawa, on his first trip in his new 23-foot fiberglass cruiser.

Other Sportsmen: **Masato Hasegawa** rides again; he paced the Tongg Ranch team with 5 goals. Jack Keenan, President of the Honolulu Rugby Football Club, is soliciting players for anticipated matches with teams from U. of California, Stanford, Australia, and New Zealand. **Ells Harris** won the PT class race at Waikiki Yacht Club.

Doctors Speak Up

Outspoken **Howard Liljestrand** touched off a hornet's nest with a talk on "Effective Pregnancy Control" at a Pearl Harbor Rotary Club luncheon in which he advocated more liberalized abortion laws for unmarried women. Most physicians polled were in sympathy, but there were a few opposition explosives such as "Abortions are legal homicide," "They are morally unsound," etc. Crusader **George Goto** commented, "Everybody recognizes the truth in his remarks. . . . The law is far behind the times."

Abraham Kagan, Director of the Honolulu Heart Program, feels that coronary heart disease is a disease of prosperity. He describes the classical heart attack victim as "a fat, middle-aged man with high cholesterol, high blood pressure, and an abnormal cardiogram, who eats too much, smokes to excess, and is physically inactive, but ambitious and subject to deadlines and pressures."

Nobu Nakasone spoke to a Hawaii Dietetic Association meeting on "Diet and Other Factors Related to Atherosclerosis and Their Role in Preventive Medicine." We have information that he advocates tuna in any form at least five times a week.

Dave Bassett, Director of the Hawaii Cardiovascular Study, notes that the death rate from heart disease is three times higher in Hawaiians than in Japanese Americans. He feels that in an obese population with a high prevalence of diabetes, a high triglyceride level is more likely associated with heart disease whereas in a non-obese population, high cholesterol levels are more likely associated with heart disease. He feels that consumption of excess calories either as alcohol or as sugars plays a role in raising triglyceride levels.

In last month's HAWAII MEDICAL JOURNAL, **Paul Gebauer** studies Naalehu disease (the phenomenon of premature aging of cattle on the Big Island) and compares it with the aging process in human beings.

The following medical articles have come to our attention: "Whole Blood Viscosity, Hematocrit and Serum Lipid Levels in Normal Subjects and Patients with Coronary Heart Disease," by **Gerald Rosenblatt, Joseph Stokes III, David Bassett,** *Journal of Laboratory and Clinical Medicine* (Feb.) '65; "Technic of Putting on Elastic Stockings," by **Eldon Dykes,** *American Journal of Surgery* (Feb.) '65; "Malignant Mesenchymoma of the Heart. Report of a Case," by **Grant Stemmerman, Peter Kim, Morton Berk,** *Journal-Lancet* (May) '65.

In an article entitled "Taking the Fun Out of Sports," Hal Wood, sports editor, is critical of scientific methods of training and overtraining such as practiced by the Rus-

continued page 62

BALDNESS FOLLOWING A SEVERE ILLNESS



Cases of alopecia areata or totalis have been aided by our wigs.

"My daughter's hair fell terribly after a fever and despite 'treatments' nothing happened, my M.D. suggested you. I find the hairpiece you made fits perfectly and looks so natural I am almost convinced it's real. My daughter's hair is growing back now."

THE HAIR CLINIC

Hawaii's Only Wigmakers

1724 Kalauokalani Way, Honolulu

(Across from Murphy Motors on Kapiolani)

Hrs. weekdays 10-5; Sat. 8:30-1. • Tel. 900-165 994-237



and Robaxin®-750
(methocarbamol 750 mg.)

(CAPSULE-SHAPED TABLETS)



It has been noted that low-back disorders frequently "...are caused by truly mechanical conditions which yield to conservative treatment."[1] Basic to this conservative treatment are bed rest, a board for the bed, and applied heat. In addition, a good muscle relaxant is often helpful, as "...muscle relaxants are useful in chronic as well as acute low backaches."[4]

Robaxin (methocarbamol) has relieved spasm and pain in cases where the patient "had not responded to conservative measures prior to drug therapy."[6] A 100-patient study showed that Robaxin provided greater relief of muscle spasm for a longer period of time without adverse reactions "than any other commonly used relaxants...."[6]

A well-tolerated[7] skeletal muscle relaxant with "specificity of action,"[7] methocarbamol leaves normal muscle tone unaffected. Moreover, there is little likelihood of sedation[7]—a considerable advantage for the patient who must remain active and alert on his job.

Significantly, clinicians advise using a muscle relaxant "early and in adequate dosage."[8] In this regard, Robaxin (methocarbamol)—*particularly in the 750 mg. dosage (2 tabs. q.i.d.)*—offers optimal therapeutic benefits without a significantly increased incidence of side effects. And just as it works well as part of the basic regimen for low-back pain, so also does Robaxin (methocarbamol) often provide muscle relaxation in such conditions as musculoskeletal injury, chronic neurological disorders, and orthopedic situations.

BRIEF SUMMARY—Robaxin (methocarbamol) Tablets: Contraindicated in hypersensitive patients. Side effects (light-headedness, dizziness, drowsiness, nausea) may occur rarely, but usually disappear on reduced dosage. Hypersensitivity reactions develop infrequently.

ALSO AVAILABLE: Robaxin® Tablets (methocarbamol, 500 mg.) Robaxin Injectable (methocarbamol, 1 Gm./10 cc.)
Robaxisal® (methocarbamol with aspirin) and Robaxisal-PH Tablets (methocarbamol with Phenaphen®).

REFERENCES: 1. Soto-Hall, R.: Med. Sci. *14*:23, 1963. 2. McCarrol, H.R.: Paper read at the Annual Meeting of the American Medical Association, Atlantic City, June 16-20, 1963. See Medical News: J.A.M.A. *185*:39 (July 13), 1963. 3. Gordon, E.J.: Med. World News *5*:54, 1964. 4. Cozen, L.: GP *26*:82, 1962. 5. Larson, C.B.: Postgrad. Med. *26*:142, 1959. 6. Forsyth, H.F.: J.A.M.A. *167*:163, 1958. 7. Weiss, M., and Weiss, S.: J. Amer. Osteopath. Ass. *62*:142, 1962. 8. Rowe, M.L.: J. Occup. Med. *2*:219, 1960.

A. H. ROBINS CO., INC., RICHMOND, VIRGINIA 23220

Robins
PHARMACEUTICALS, RESEARCH

sians, Poles, Japanese, and a few Americans such as **Richard You** and his "X.D.R." (exercise, diet, and rest) System. He labels Richard a training nut, though admitting that Richard has probably trained more world champions and record breakers than any individual in history.

Yachtsman **Alvin Majoska** called Mrs. Sharon Sites's transpacific crossing in a 25-foot sailboat a "harebrained stunt." "It is a cause for taxpayers to scream. Had she become lost, a Coast Guard search for her would have cost tens of thousands of dollars."

We witnessed the verbal battle of the "Doves" and the "Hawks" in the Letters to the Editor page. "Doves" **Willis Butler** feels that the Viet Cong represent the group fighting for the independence of the Vietnamese and that we should get out, while **Fred Reppun** in an eloquent letter contended that "now that we are in it with both feet, let's go all out to win." We read with embarrassment some of the letters written by Willis Butler. We also advocate freedom of the press and speech, but not in freedom to distort and confuse. The M.D. after our names behooves us to show certain restraints and avoid embarrassment to the other members of our profession.

Bob Wong, County Society President, and **O. D. Pinkerton,** HMA President, wrote a letter supporting **Leo Bernstein,** Director of the Department of Health in reference to the recent controversy involving the State Hospital.

We have not always agreed with **Fred Reppun,** but we admire his stand in the face of the Medicare Law passage that "as individual physicians, many of us will not serve any master except our patient; we will not serve a government whose primary concern will be to forbid us to do what we think that patient needs and wants." Such eloquence deserves notice. We also note that **Mary Glover** feels that bombing North Viet Nam is the surest way to drive them into Communist arms.

Health Dept.

We shall bypass the State-Hospital-vs.-Health-Dept. issue except to comment that the newspapers had a heyday and much too much name calling and fault finding resulted, with quotes and misquotes from well-meaning people and reporters. We were happy to note that our medical societies gave Leo Bernstein a vote of confidence, and agreed that Robert Spencer is doing a good job too.

Audrey Mertz of the Mental Health Division announced that the Third Hawaii State Legislature appropriated funds to increase by 26 persons the staff at the State Hospital. **F. H. Tong,** District Health Officer on Maui, reports 38 instances of communicable disease. **Charles Stewart,** former instructor in psychiatry at the University of Maryland School of Medicine was appointed to the Maui Mental Health Service. **Peter Kim,** State Health Officer for Kauai, was master of ceremonies at the ground breaking ceremonies held at the new $315,000 Lihue Health Center.

Entrepreneurs

Dick Sakimoto's new "Kamome," a haole sampan with flying bridge, is available for chartering. **Francis Lum's** Kapiolani Medical-Dental Center, Hawaii's first fee-simple condominium office building, is scheduled to open next spring and will be a nine-story prestressed concrete structure with the five top stories for physicians and dentists and nine staggered levels of parking between the 5th floor and ground level. (Sounds like an architectural phenomenon.) **James Fleming,** Maui state senator, flying missionary, doctor extraordinary, is Vice President of Sky Tours Hawaii Inc., a new company to conduct one-day, all-island aerial tours. **Ralph Cloward,** neurosurgeon, world traveler, and political commentator, is Vice President of the Diamond Head Broadcasting System which expects to construct a $60,000 radio station.

As Others See Us

An editorial from *Pacific Business News* strikes our fancy and deserves to be quoted in its entirety: "The medical profession has a superb reputation for being unable to sway public opinion. Now Hawaii's doctors may have succeeded in putting a dent in that reputation. They have notified their patients that hereafter they will show the four per cent general excise tax on their bills—something they should have done years ago when nearly every other business began the practice. If the medics had discussed Medicare in terms of the pocket book instead of social philosophy, they might have won the fight. The poor propaganda effort on Medicare cost them a fortune. Now a little slip of paper that says our taxes have been raised and we're going to let you know it on your bills—that little slip of paper is making one heck of an impression and is a major contribution to economic education.

"The trouble with the doctors is that they're reluctant to give anyone the idea that theirs is a business. Could that be the reason bills from business firms are paid long before the doctors are paid? Is it possible that people have the notion that merchants have an overhead to meet, but that doctors don't?

"Maybe business and medicine do mix...and not just at tax time." Our sincere thanks to this pragmatic author.

Travelers and Social News

Pediatrician **Donald Char,** internist **Dudley Seto,** ob gyn man **Francis Terada,** and surgeon **Charley Judd** left for Apia, Western Samoa, to conduct a medical information and surgical technique exchange program under a project sponsored by the East-West Center. **Phil Chu,**

continued page 64




TROUBLED BY BLEMISHES?

Don't let unsightly veins keep you from the beach. Use COVERMARK. . . . It's completely waterproof, covers without an artificial look to conceal burns, birthmarks, surface scars, dark circles, and brown spots.

Lydia O'Leary
OF HAWAII
1010 ALAKEA ST., ROOM 202
PHONE 574-704

for the months when growth is greatest, here's his growing-up formula SIMILAC WITH IRON®

12 mg ferrous iron per quart of feeding

"Iron deficiency is undoubtedly the most common cause of anemia in infancy." The usual diet cannot keep up with the need for iron imposed by the rapid growth rate.[1]

> At 6 months, in the midst of their most rapid period of growth, 70% of infants' calories comes from cow milk, which contains little or no iron.[2]

Similac With Iron readily meets the iron needs of the months of rapid growth. In both premature[3,4] and term infants[4] its value has been clinically demonstrated. No infant who received Similac With Iron, as his sole iron source from birth through 9 months, developed any evidence of iron depletion.

References: 1. Githens, J. H., and Hathaway, W. E.: Clin. Pediat. *2*:477 (Sept.) 1963. 2. Filer, L. J., Jr., and Martinez, G. A.: Clin. Pediat. *2*:470 (Sept.) 1963. 3. Gorten, M. K., and Cross, E. R.: J. Pediat. *64*:509, 1964. 4. Marsh, A., *et al.*: Pediatrics *24*:404 (Sept.) 1959.



ROSS LABORATORIES COLUMBUS, OHIO 43216

Chief Surgeon at Kaiser, left for a West Coast vacation with his family. The **Robert Johnstons** and two of their daughters left for Sydney, Australia, and the wedding of their son Thomas to Miss Margot Gosse of Sydney.

The **Francis Kaneshiros** in a month-long trip attended the 25th reunion of Jefferson Medical School and the AMA Convention in New York. They found New York so dry that water was not served with meals unless requested; they later froze in the middle of June at Jasper in the Canadian Rockies.

The **James Harrisons** attended the Norris-Akaji preview at the Art Academy. Jim, an ardent Bumpei fan, picked up a sculpture to examine its construction and a little old lady scolded, "That is like looking at the back of a teaspoon at a dinner party to see if your hostess has sterling." The **Shoyei Yamauchis** opened their Manoa home for the McKinley Scholarship fund raising during the Centennial. The **Niall Scullys** had an open house for José Iturbi and his sister. In August, the Scullys (brave souls), left for a trailer camping trip on the Island of Hawaii with their five daughters and two sons, ranging from 10 years to 10 months. Linguist **David Lee Pang** was master of ceremonies at a birthday dinner party for a Mrs. Moon See Wong; he gave a brief biography in both English and Mandarin.

Filched

A copper name plaque was taken from the **William Holmes's** residence at 3885 Round Top; the culprits were apprehended. **Mary Glover** lost $300 worth of jewelry and other items; the burglars took a wrist watch, three rings, slide projector, camera, binoculars, and, to top it all, liquor bottles. Burglars broke into **Marquis Stevens's** home, threw the dog a bone and walked out with a 23-inch television console. This is the third set taken from their home in three years. The Stevenses slept upstairs while the dog chewed contentedly on the bone. Whereas **Benjamin Higashi** lost $600 worth of narcotics and equipment from his office at 1214 Beretania St., **Milton Trager** lost only $2 when burglars broke into his office as well as others at 305 Royal Hawaiian Ave.

George Goto, fisherman, obstetrician, and social reformer, wrote an angry letter to Kauai officials complaining that in June, a resident ordered him off a reef where he was fishing and threatened him with arrest for trespassing even though the high water mark was several yards mauka.

Et Cetera

We were flabbergasted at a Queen's Medical Conference to learn that attractive pathologist **Ann Catts** was "shorthanded" and could not make her appearance at the conference. We later met her admiring the caricatures at the Bumpei Akaji-Ben Norris exhibit and were relieved to find her quite well-proportioned. After a review of cardiac resuscitation efforts at Queen's (68 cases with 6 survivors between January and July of this year), we heard one comment that "At Queen's, no one is allowed to die without being stomped on." We learned that **Al Ishii** had lost 20 lbs. by working out 1½ hours each morning at Mits' Gym over a six-week period. This debunks the theory that dieting was the only way to reduce. We later met him as an inpatient recuperating from a slipped disc. Moral: A little can be good, but too much may be harmful.

News

IX International Cancer Congress, October 23-29, 1966,

continued page 66



These glasses are important to him—in his work, socially, and in terms of his physical well-being.

When's the last time you had an eye check? Schedule an appointment soon with your eye physician.

OBRIG Contact Lenses fitted by prescription. We are GUILD OPTICIANS, serving Hawaii since 1939.

GUILD OPTICIANS OPTICAL DISPENSERS of Hawaii, Inc.

1133 BISHOP ST. 576-570
312 ALA MOANA BLDG. 976-925

Your stationery is a reflection of you... be certain the reflection is good!

star-bulletin printing company

the hallmark of fine printing in honolulu



one place your hay-fever patient doesn't need **ORNADE**® (unless he has a cold)

Trademark

Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride, and 2.5 mg. of isopropamide, as the iodide.

...but if your patient can't get away from hay fever, relieve sneezing, weeping and nasal congestion for 24 hours with one 'Ornade' Spansule® brand sustained release capsule q12h

Summary of contraindications, cautions and side effects: Do not use in patients with glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal obstruction, or bladder neck obstruction. Use with caution in the presence of hypertension, hyperthyroidism, or coronary artery disease. Drowsiness; excessive dryness of nose, throat or mouth; nervousness or insomnia may occur on rare occasions but are usually mild and transitory.

Before prescribing, see SK&F product Prescribing Information.

Smith Kline & French Laboratories SK&F

Notes and News *continued from 64*

Tokyo, Japan. In connection with the IX International Cancer Congress, which will take place in Tokyo, Japan, October 23-29, 1966, a charter flight and several group flights are contemplated, thus substantially reducing the cost of transportation. Members of the immediate family of congress participants will be eligible. Anyone interested should communicate with Hirsch Marks, M.D., 435 East 57th Street, New York 22, N. Y.

American College of Surgeons. Sectional Meeting in Houston, Texas (Headquarters at the Shamrock Hilton Hotel), January 31–February 2, 1966.

The Heart Study Enters Second Phase. Over 10,000 men have completed questionnaires in the first phase of the study. The examination phase of the study which is now beginning consists of medical and dietary history and cardiovascular examination. Cardiovascular morbidity and mortality in the study population will be followed over the next several years.

As a part of that follow-up, practicing physicians are asked to assist by obtaining permission for postmortem examination in all deceased males of Japanese ancestry aged 45 to 65 regardless of cause of death. If permission for complete postmortem cannot be obtained, permission for limited examination of the heart alone would be important and that can be performed at the hospital or mortuary. Reports of all such examinations will be sent to the attending physician.

HAWAII CALENDAR*

HMA ANNUAL MEETING, May 11-15, 1966, Princess Kaiulani Hotel. **AMA CLINICAL CONVENTION,** November 28-December 1, 1965, Philadelphia. **AMA ANNUAL CONVENTION,** June 26-30, 1966, Chicago. **PAN PACIFIC SURGICAL** Association 10th Congress, Part I, September 20-28, Princess Kaiulani. Parts II and III to follow in Japan, Hong Kong, The Philippines, Thailand, India, Singapore, Australia, and New Zealand.

OCTOBER

October 4-7—**Binational Meeting,** U.S. and Japan Medical Science Conference. East-West Center.

October 8-13—**HCMS—Postgraduate Lecturer** John Bunker, Professor of Anesthesiology, Stanford, School of Medicine, talking on "Acid-Base Balance and Acute Disturbance in Ventilation." Mabel Smyth.

October 14-16—**Hawaii Nurses Assn.** Annual Meeting. Mabel Smyth Bldg.

October 27-29—**Hawaii Heart Association.** Donald Sparkman, Consultant, State of Washington, Division of Vocational Rehabilitation, Honolulu.

October 28-29—**Assn. of Western Hospitals Institute.** Hawaiian Village.

NOVEMBER

November 1-30—**Visiting Professor** William T. Fitts from the Dept. of Surgery, Hospital of the University of Pennsylvania. Honolulu.

November 1-December 31—**Visiting Professor** Sidney Carter from the Dept. of Neurology, Columbia College of Physicians & Surgeons, New York.

November 8-20—**Visiting Professor** Ralph E. Wolkart from the Dept. of Medicine, Passavant Memorial Hospital, Chicago. Honolulu.

November 12—**Visiting Professor** Richard K. Blaisdell from the Dept. of Medicine, University of Chicago. St. Francis Hospital.

November 14-18—**Pacific Int. Dental Conference.** Hawaiian Village.

November 21—**Seminar** on Planning for Pediatrics of Tomorrow. Princess Kaiulani (tentatively).

November 22—**Visitor Pediatric Allergist** Leon Unger from Chicago. Mabel Smyth, 7-9 P.M.

DECEMBER

December 1-31—**Visiting Professor** Sidney Carter. Second month.

December 15-17—**HAGP-Lilly Seminar** presenting Kay Clawson of the University of Washington School of Medicine talking on "Common Foot Problems."

JANUARY

January 1-February 28—**Visiting Professor** Robert McKay from the Department of Pediatrics, University of Vermont.

January 8-February 4—**Visiting Professor** Mark Ravitch from the Dept. of Surgery, Johns Hopkins School of Medicine. Honolulu.

January 24-28—**Postgraduate Course** in Allergy presenting James W. Willoughby. Princess Kaiulani.

January 31-February 11—**Visiting Professor** Fred J. Ansfield from the Dept. of Clinical Oncology, University of Wisconsin Medical School. Honolulu.

FEBRUARY

February 1-28—**Visiting Professor** Robert McKay. Second month.

MARCH

March 4-14—**Visiting Professor** Macdonald Critchley, Neurologist, from the Dept. of Medicine, National Hospital, London. Honolulu.

March 7-23—**Visiting Professor** Ralph Jacox from the University of Rochester, Department of Medicine. St. Francis Hospital. ■

* Errors in listings are not the responsibility of the HAWAII MEDICAL JOURNAL.

Fun and relaxation on the magnificent Kona Coast of the Big Island. World famous deepsea fishing . . . every room with a view in a resort atmosphere right in the heart of Kailua-town.



Rates from $17, double, EP

and on Kauai enjoy

- Coco Palms Resort
- Hanalei Plantation
- Waiohai

Call

ISLAND HOLIDAYS

931-111

2229 Kalakaua Ave.
Honolulu

ogy, pathology, and treatment. The illustrations are abundant and lucid.

I therefore highly recommend this book as a reference text in the approach of any patient with pain in the chest.

HENRY H. C. FONG, M.D.

★Synopsis of Pathology, 6th Ed.

By W. A. D. Anderson, M.A., M.D., F.A.C.P., F.C.A.P., 883 pp., $9.75, The C. V. Mosby Company, 1964.

WHENEVER I see the *Synopsis* and its counterpart, the textbook *Pathology* (1389 pages), side by side, I invariably wonder how so much material can be crammed into such a small volume. I am amazed not only by the fact that the material is there, but also by the inclusion of so many and such excellent photographs and photomicrographs. The *Synopsis* would hardly be a text that one would recommend for general reading. In fact, I believe I would rather read the complete textbook, unless I had to cover the subject in its entirety in a relatively short period of time for purposes of an examination.

PAUL Y. TAMURA, M.D.

Cardiac Arrest and Resuscitation, 2d Ed.

By Hugh E. Stephenson, Jr., B.S., M.D., F.A.C.S., 501 pp., $15.00, The C. V. Mosby Company, 1964.

THIS VOLUME represents a comprehensive, up-to-date review, simply and clearly written, with a minimum display of controversial opinions. Of particular interest are the two chapters concerning post-resuscitative care and the prevention of cardiac arrest. A sub-chapter dealing with the medico-legal aspects of cardiac arrest and resuscitation will give some comfort to physicians who have felt particularly vulnerable in such clinical situations.

The text itself is not filled with lengthy methods or procedures, and the literary style is straightforward—a rather unusual accomplishment in a text having multiple authors. The only criticism rests in an uneasy feeling that the material could have been adequately covered in a volume half this size. All physicians will find something of value, whether in the text or the extensive bibliography.

BERNARD FONG, M.D.

★Pediatric Procedures

By Walter T. Hughes, Jr., M.D., 208 pp., $7.50, W. B. Saunders Company, 1964.

THIS IS AN EXCELLENT review of the routine technical procedures carried on by those dealing with infants and childhood diseases. Dr. Hughes has written a simplified, well described and diagrammed textbook outlining the basic principles and steps to be taken in performing pediatric procedures. For the nurses, he describes the methods of restraining the infant and child, methods of measuring height, weight, temperature, and blood pressure; for the laboratory technician and house staff, the various methods of collection of blood specimens and manner of initiating infusions; for the physician, a general review of exchange transfusion, injections, and the procedures performed in the various systems of the body.

This book is highly recommended to neophyte medical students, house staff, and nurses who are beginning their pediatric service and training. It will serve as an excellent guide, with its simple descriptions in the development of ease and agility in performing pediatric procedures.

CALVIN C. J. SIA, M.D.

★Thannhauser's Textbook of Metabolism and Metabolic Disorders, 2d Ed.

Edited by Nepomuk Zollner, American Edition translated and edited by Solomon Estren, M.D., F.A.C.P., 968 pp., $19.75, Grune & Stratton, 1964.

THE KNOWLEDGE OF molecular medicine is an integral part of medicine today. It is without doubt that the busy practitioner must cope with this trend.

The contributing authors of the second volume have done an excellent job of presenting the complexities to the reader. (The first volume is also highly recommended to the interested reader.) The graphic illustrations are indispensable. The first two chapters, metabolism of mucopolysaccharides and nucleic acids, are presented in a relatively easy readable manner. It is difficult to treat these subjects simply but the authors have written these chapters in a manner which made it most interesting and understandable to this reviewer.

The other chapters deal with metabolism of lipids, steroids, bile acids and pigments, iron, calcium and phosphorus, and fluids and electrolytes and blood coagulation.

This second volume is highly recommended for reference reading.

NOBORU OISHI, M.D.

Also Received

The Physiology and Pathology of Bed Rest

By Norman L. Browse, M.D., F.R.C.S., 221 pp., $8.50 plus 2% shipping charge, Charles C. Thomas, 1965.

THE PHYSIOLOGY of bed rest is presented in this clearly written text which begins to clarify the need and danger of this commonly recommended therapy.

School Health Education Study 1961-1963

By Elena M. Sliepcevich, 74 pp., No charge, School Health Education Study, Washington, D.C., 1964.

A GOOD REFERENCE text for anyone interested in health education.

continued page 68

MEDICAL INDUSTRIES, LTD.

1451 South King Street **Phone 990-396**

DEPUY ORTHOPEDIC EQUIPMENT

VITALLIUM

HALLMARK

MISDOM-FRANK SURGICAL INSTRUMENTS

STRYKER CORPORATION

Book Reviews continued from 67

Agoraphobia in the Light of Ego Psychology

By Edoardo Weiss, M.D., 132 pp., $5.50, Grune & Stratton, 1964.

RECOMMENDED for those interested in the psychodynamics and treatment of this specific phobia; i.e., the fear of being alone in a wide-open space and more specifically, as defined by Weiss, the phobia associated particularly with abandoning a fixed point of support such as one's home.

Left-handedness

By Henry Hécaen and Julian de Ajuriaguerra, 162 pp., $5.00, Grune & Stratton, 1964.

A TRANSLATION of an interesting monograph on a not too uncommon entity.

Applied Human Biology for Nurses

By William C. Fream, S.R.N., B.T.A., Cert. (Hon.), S.T.D., 408 pp., $5.75, The Williams and Wilkins Company, 1964.

AN ATTEMPT to introduce the student nurse to the anatomy and physiology of the body as related to disease.

How to Study, Revised Ed.

By Thomas F. Staton, Ph.D., 60 pp., $1.00 p.p., McQuiddy Printing Company, 1962.

A USEFUL MONOGRAM for students. The PQRST system is advocated, i.e. preview, question, read, state, and test. If your child is having academic difficulties this may be a good guide for you and your child.

Clinical Examination—A Textbook of Physical Diagnosis

By Thomas N. Stern, M.D., 381 pp., $8.50, Year Book Medical Publishers, 1964.

A WELL-ILLUSTRATED, clearly written text on a subject which can never be overemphasized.

Principles of Clinical Psychology

By Luciano l'Abate, 317 pp., $8.75, Grune & Stratton, 1964.

CLINICAL PSYCHOLOGY and its problems discussed by a psychologist.

Progress in Clinical Psychology, Vol. VI

Edited by Lawrence Edwin Abt, Ph.D., and Bernard F. Riess, Ph.D., 252 pp., $8.75, Grune & Stratton, 1964.

THE 6TH VOLUME of current concepts and progress in clinical psychology.

★Medical Illustration

By William E. Loechel, 341 pp., $14.50, Charles C. Thomas, 1964.

A "MUST" for all doctor-authors whose prime objective is to convey to an audience a clearer concept of a message —primarily by medical illustrations.

Ophthalmic Plastic Surgery, 3rd Ed.

By Sidney A. Fox, M.S. (Ophth.), M.D., F.A.C.S., 493 pp., $19.50, Grune & Stratton, 1964.

WELL ILLUSTRATED and organized for surgeons in this field.

Basic Patient Care

By Maja C. Anderson, B.A., M.N., 234 pp., $3.75, W. B. Saunders Company, 1965.

ANOTHER AID to nursing education.

A Textbook of Medical-Surgical Nursing

By Jean C. Barbata, R.N., M.S., Deborah M. Jensen, R.N., M.A., and William G. Patterson, R.N., B.S., 1,010 pp., $8.95, G. P. Putnam's Sons, 1964.

AN INTEGRATED APPROACH in nursing education where the patient is considered as a "whole" rather than merely as a medical or a surgical problem. General as well as specific nursing problems seem to be adequately covered in this text.

A Handbook for the Young Diabetic, 3rd Ed.

By Alfred E. Fisher, M.D., and Dorothea L. Horstmann, R.N., 72 pp., $3.75, Intercontinental Medical Book Corp., 1964.

A USEFUL HANDBOOK for young and old diabetics but with the main emphasis on the problems of juvenile diabetics.

Recreation: A Medical Viewpoint

By Paul Haun, Compiled and Edited by Elliott M. Avedon and Frances B. Arje, 98 pp., $1.50, Bureau of Publications, Teachers College, Columbia University, New York, 1965.

THE ROLE OF RECREATION in medicine and as an absolute fundamental human need is discussed by this eminent pioneer in this monograph.

Drugs and Solutions: A Programmed Introduction for Nurses

By Claire B. Keane, R.N., and Sybil M. Fletcher, R.N., 196 pp., $2.75, W. B. Saunders, 1965.

A USEFUL AID in nursing education.

★ Heart Attack: New Hope, New Knowledge, New Life

By Myron Prinzmetal, M.D., in collaboration with William Winter (patient), with a preface by Walter C. Alvarez, M.D., 232 pp., $1.75, Simon & Schuster, 1965.

RECOMMENDED HIGHLY for your interested "coronary" patients. It will answer many of their questions.

Proceedings of the Third Colloquium for Postgraduate Teaching of Psychiatry

By Committee on Psychiatry and Medical Practice, 5 pp., No Charge, American Psychiatric Association, 1964.

THE PROBLEMS OF TEACHING postgraduate psychiatry to practicing physicians are discussed.

On Becoming an Educated Person, 2d Ed.

By Virginia Voecks, Professor of Psychology, 206 pp., $2.00, W. B. Saunders Company, 1964.

RECOMMENDED as a guide for students entering or preparing for college.

On Diabetes Mellitus
Selected Topics for Students and Clinicians

By W. P. U. Jackson, M.A., M.D., F.R.C.P., D.C.H., 393 pp., $12.50, Charles C. Thomas, 1964.

A COMPREHENSIVE clinical approach to diabetes.

U. S. Army Medical Department
Preventive Medicine in World War II

Edited by Colonel John Boyd Coates, Jr., MC, USA, 397 pp., $4.25, U. S. Government Printing Office, 1964.

THIS VOLUME covers communicable diseases and arthropod borne diseases, other than malaria.

A History of Wine as Therapy

By Salvatore P. Lucia, M.D., 234 pp., $6.50, J. B. Lippincott Company, 1963.

AN INTERESTING, clearly written history of the therapeutic aspects of wine. The empiric use of wine over the centuries is analyzed in relation to modern concepts of its pharmacologic effects.

Alcohol and Civilization

Edited by Salvatore Pablo Lucia, M.D., Sc.D., 416 pp., $3.95, McGraw-Hill Book Company, Inc., 1963.

AN EXCELLENT SYMPOSIUM dealing with various aspects of alcohol—pharmacologic, physiologic, therapeutic—and its multiple effects on our society. Interesting reading on a "stimulating" subject.

★ The Psychology of Deafness, 2d Ed.

By Helmer R. Myklebust, 423 pp., $7.75, Grune & Stratton, 1964.

AN EXCELLENT analysis and discussion of the problems of, and aids for, the deaf.

The Evaluation of Psychiatric Treatment

Edited by Paul H. Hoch, M.D., and Joseph Zubin, Ph.D., 326 pp., $12.00, Grune & Stratton, 1964.

THE OBJECTIVE MEANS of evaluating psychiatric treatment are discussed. Although the problems are complex, since one must decide on the criteria of objectivity, the need for this text is evident.

Opportunities in a Psychiatry Career

By Henry A. Davidson, M.D., 144 pp., $1.45, Universal Publishing Corporation, 1964.

VALUABLE for those who desire to pursue this specialty.

The Mask of Sanity, 4th Ed.

By Harvey Cleckley, M.D., 510 pp., $9.75, The C. V. Mosby Company, 1964.

FOURTH EDITION of a topic worthy of discussion and further study—the psychopathic personality or sociopath.

U. S. Army Medical Department
Blood Program in World War II

Editor in Chief Colonel John Boyd Coates, Jr., MC, USA, 922 pp., $6.00, U. S. Government Printing Office, 1964.

THE HISTORICAL BACKGROUND of the problems and benefits of blood volume replacement which has lowered the mortality rate in combat.

Micro-Analysis in Medical Biochemistry, 4th Ed.

By I. D. P. Wootton, Ph.D. (Lond), M.A., M.B., B. Chir. (Camb). F.R.I.C., M.C., Path., 254 pp., $5.50, Grune & Stratton, 1964.

A LABORATORY MANUAL for those doing "chemical pathology."

Illness and Cure

By Joost A. M. Meerloo, M.D., Ph.D., 282 pp., $8.75, Grune & Stratton, 1964.

A PSYCHIATRISTS' view of problems in medicine and mental health.

Manual of Hazardous Chemical Reactions

By Sectional Committee on hazardous chemical reactions of the NFPA Committee on chemicals and explosives, 102 pp., $1.25, National Fire Protection Association, Boston, Mass., 1964.

A LISTING of chemicals in respect to combustible dangers.

Consultation with Your Doctor for Personal Understanding of Marriage

By Jean J. Rutherford, B.A., and Robert N. Rutherford, M.D., 92 pp., $1.50, Budlong Press Company, 1964.

A VALUABLE MANUAL which could aid the patient when the ever-common marriage problems present themselves.

Ciba Foundation Symposium on Control of Glycogen Metabolism

Consulting Editor W. J. Whelan, Ph.D., D.Sc., F.R.I.C., and Editor for Ciba Foundation, Margaret P. Cameron, M.A., 434 pp., $12.50, 1964.

A VALUABLE SYMPOSIUM on basic physiology of glycogen metabolism. ■

WILLIAMS MORTUARY

"CHAPEL OF THE CHIMES"

1076 S. Beretania St., Phone 52-587 — Ample Parking Adjoining Mortuary

OVER A CENTURY OF SERVICE

"Service measured not by gold but by the Golden Rule"

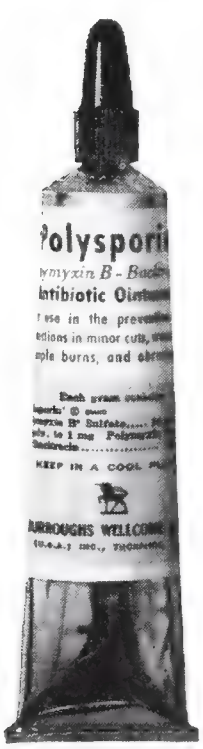
MEMBER

National Selected Morticians, National Funeral Directors Association,
Order of the Golden Rule, Hawaii Funeral Directors Association

Our "Angels"

	Page
Aloha Rent-Alls	56
American Factors, Ltd.	3
American Tobacco Co.	13
Ames Company, Inc.	71
Ayerst Laboratories	72
Burroughs Wellcome & Co., U.S.A., Inc.	18, 70
Carnation Company	5
Coca-Cola Bottling Co. of Honolulu	60
Cutest Uniforms	10
Eastman Kodak	8
Geigy Pharmaceuticals	7, 10, 11, 17
General Diagnostics	57
Greentree Estates	15
Hair Clinic, The	60
Hawaii Medical Service Association	14
Island Holidays	66
Kahanaola	19
Lederle Laboratories	12
Lilly, Eli, & Co.	1, 24
Medical Industries, Ltd.	67
Medical Placement Bureau	10
O'Leary, Lydia, of Hawaii	62
Optical Dispensers of Hawaii, Inc.	64
Parke, Davis & Co.	2
Professional Services	20
Robins, A. H., Co.	Inserts (between pages 20 & 21 and 60 & 61) 9, 21, 61
Roche Laboratories	23
Ross Laboratories	63
Schuman Carriage Co., Ltd.	20
Searle, G. D., & Co.	55
Smith, Kline & French	65
Star-Bulletin Printing Co.	64
Williams Mortuary	69
Winthrop Laboratories	22

in treating topical infections, no need to sensitize the patient



USE 'POLYSPORIN'® brand
POLYMYXIN B-BACITRACIN
ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
Supplied: In ½ oz. and 1 oz. tubes
Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

November-December, 1965

HAWAII MEDICAL JOURNAL

Make it a
MERRY CHRISTMAS!



FIGHT TUBERCULOSIS
and other
Respiratory Diseases

Give generously!

U.C. MEDICAL CENTER LIBRARY
DEC 29 1965
San Francisco 22,



In this issue

Festschrift

honoring

Dr. Max Levine

Enteropathogenic E. coli
Children, Pets and Disease
Role of Health Departments
Toxoplasmosis in Polynesia
Bat Rabies
etc.

Hawaii Calendar, page 180

Table of Contents, page 78

VOLUME 25 • NUMBER 2



the difference between cough and relief

Benylin® Expectorant

Each fluidounce contains: 80 mg. Benadryl® (diphenhydramine hydrochloride, Parke-Davis); 12 grains ammonium chloride; 5 grains sodium citrate; 2 grains chloroform; 1/10 grain menthol; and 5 per cent alcohol.

for relief of coughs due to colds or allergy

PRECAUTIONS: Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this preparation. Hypnotics, sedatives, or tranquilizers, if used with BENYLIN EXPECTORANT, should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENYLIN EXPECTORANT. PACKAGING: Bottles of 4 oz., 16 oz., and 1 gallon.

72165

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

ONLY 20 MINUTES FROM
DOWNTOWN HONOLULU . . .

KAHANAOLA

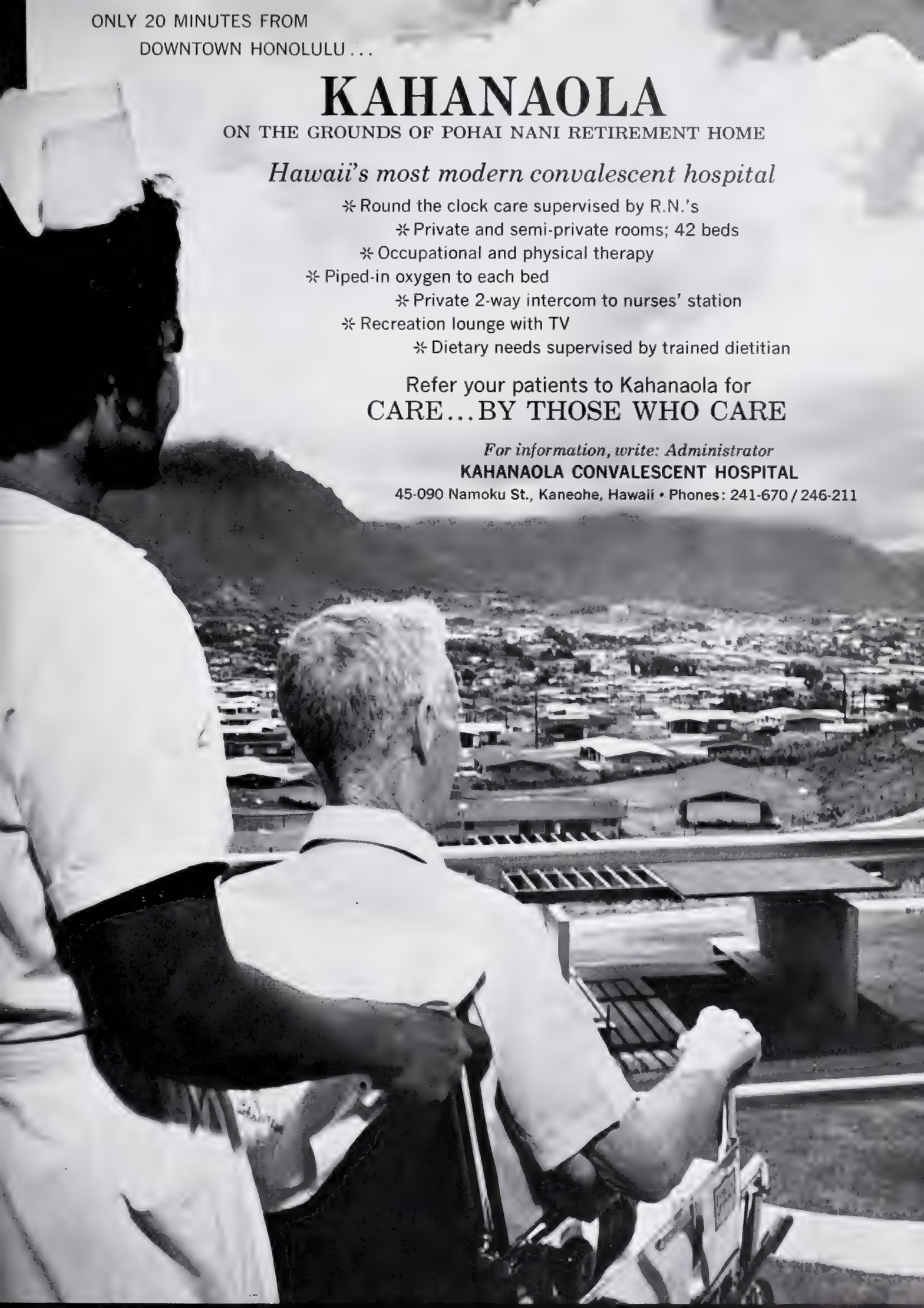
ON THE GROUNDS OF POHAI NANI RETIREMENT HOME

Hawaii's most modern convalescent hospital

- Round the clock care supervised by R.N.'s
- Private and semi-private rooms; 42 beds
- Occupational and physical therapy
- Piped-in oxygen to each bed
- Private 2-way intercom to nurses' station
- Recreation lounge with TV
- Dietary needs supervised by trained dietitian

Refer your patients to Kahanaola for
CARE . . . BY THOSE WHO CARE

For information, write: Administrator
KAHANAOLA CONVALESCENT HOSPITAL
45-090 Namoku St., Kaneohe, Hawaii • Phones: 241-670 / 246-211



ENDORSED BY: American Hospital Assoc. / Hawaii State Nursing Home Assoc. / Hospital Assoc. of Hawaii
American Nursing Home Assoc.

APPROVED FOR PAYMENT BY HAWAII MEDICAL SERVICE ASSOC.

HAWAII MEDICAL JOURNAL

Published Bi-Monthly by the HAWAII MEDICAL ASSOCIATION (Incorporated in 1856 under the Monarchy), 510 S. Beretania St., Honolulu, Hawaii 96813 • *Editor,* HARRY L. ARNOLD, JR., M.D. • *Assistant Editor,* DORIS R. JASINSKI, M.D. • *News Editor,* HENRY N. YOKOYAMA, M.D. • *Managing Editor,* LEE MCCASLIN

VOLUME 25, NUMBER 2 • NOVEMBER-DECEMBER, 1965 • $6.00 A YEAR, $1.00 A COPY

The Hawaii Medical Association

Officers 1964-1965

President • O. D. PINKERTON, *Honolulu*
President-Elect • THEODORE T. TOMITA, *Honolulu*
Past President • SAMUEL D. ALLISON, *Honolulu*
Secretary • RANDAL A. NISHIJIMA, *Honolulu*
Treasurer • HERBERT Y. H. CHINN, *Honolulu*

County Presidents

Hawaii County • RAYMOND T. EKLUND, *Kamuela*
Honolulu County • ROBERT T. WONG, *Honolulu*
Kauai County • WEBSTER BOYDEN, *Lihue*
Maui County • MARION HANLON, *Wailuku*

Delegate to A.M.A. • RICHARD D. MOORE, *Honolulu*
Alt. Delegate to A.M.A. • GEORGE H. MILLS, *Honolulu*

Councillors 1964-1965

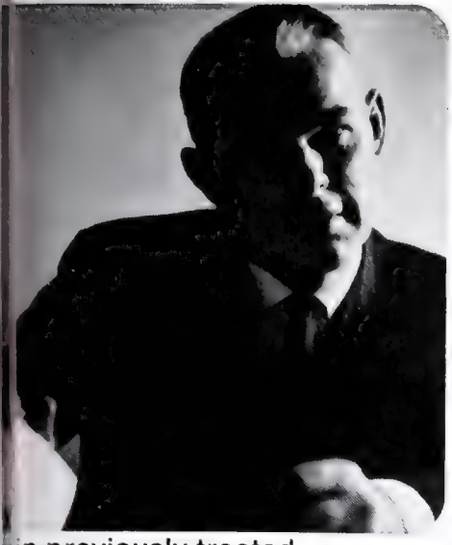
Maui • JOSEPH E. ANDREWS
Honolulu • GEORGE H. BATTEN
Honolulu • BERNARD W. D. FONG
Honolulu • ANDREW C. IVY, JR.
Hawaii • ROBERT M. MIYAMOTO
Kauai • BURT O. WADE

Officers — County Societies — 1965

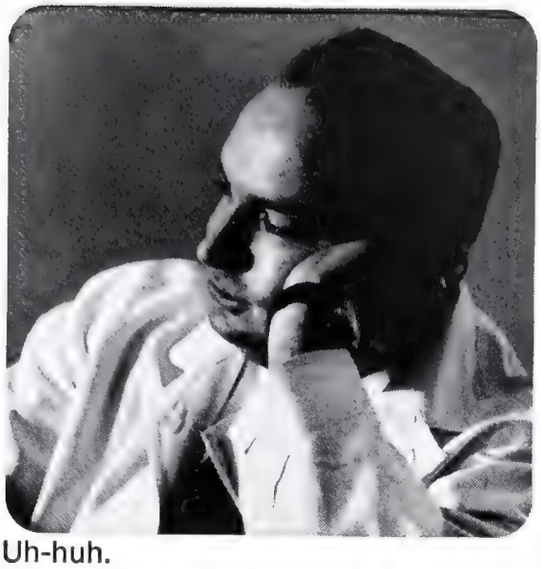
HAWAII		HONOLULU
RAYMOND T. EKLUND •	President	• ROBERT T. WONG
ED B. HELMS •	Vice President	• JOHN J. LOWREY
ETTA WRIGHT BEST •	Secretary	• GEORGE H. MILLS
PAUL J. CALDWELL •	Treasurer	• RICHARD E. ANDO
KAUAI		**MAUI**
WEBSTER BOYDEN •	President	• MARION HANLON
Y. MIYASHIRO •	Vice President	• KENNETH A. HALING
ROBERT J. EMRICK •	{Secretary} {Treasurer}	• BILLIE FERN STROTHER

The JOURNAL may not be held responsible for opinions expressed in papers, discussions, communications, or advertisements. The advertising policy of the HAWAII MEDICAL JOURNAL is governed by the rules of the Council on Drugs of the American Medical Association. The right is reserved to reject material submitted for editorial or advertising columns. All material for publication must be in the hands of the editor on or before the 10th day of the month preceding publication date. Reprints of original articles will be supplied at actual cost, provided request is attached to manuscript or made in sufficient time before publication. A reasonable number of cuts and illustrations accompanying an article will be accepted for printing. The right is reserved to ask the author to bear cost of these when it is found necessary to do so.

Copyright, 1965, by the Hawaii Medical Association, Honolulu, Hawaii. Entered as second class matter, October 17, 1941, at the Post Office in Honolulu, Hawaii, under the Act of August 24, 1912. Office of Publication: Mabel L. Smyth Memorial Building, 510 S. Beretania St., Honolulu, Hawaii 96813.



…in previously treated …ensive patients…



Uh-huh.

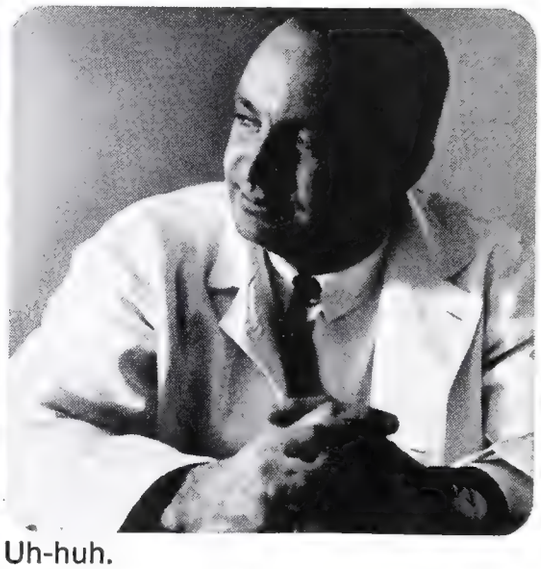


Regroton improved response in 76 out of 80…

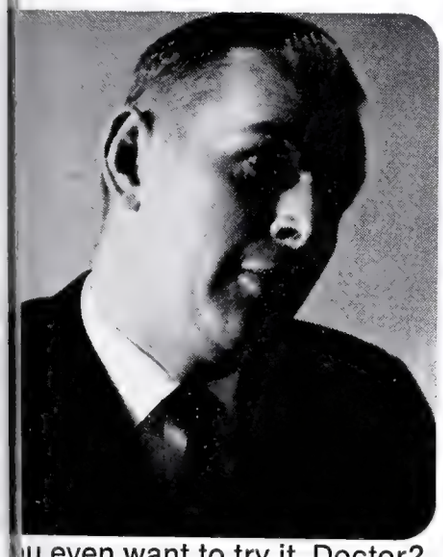




…reducing mean arterial pressure from 135 to 112 mm. Hg.



Uh-huh.



…u even want to try it, Doctor?



I've *already* got eleven patients doing fine on Regroton.



Why didn't you say so in the first place?

…egroton®

Superior to other antihypertensives in 76 of 80 patients in a 2-year study*

Geigy

…*n:* Each tablet contains chlorthalidone, …f reserpine, 0.25 mg.

…*cations:* History of mental depression, …tivity, and most cases of severe renal …diseases.

…iscontinue 2 weeks before general … 1 week before electroshock therapy, …ession or peptic ulcer occurs.

…*s:* Reduce dosage of concomitant anti-…e agents by one-half. Discontinue if …es or liver dysfunction is aggravated. …imbalance and potassium depletion … take particular care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use with caution in patients with ulcerative colitis, gallstones, or bronchial asthma.

Side Effects: Nausea, vomiting, diarrhea, muscle cramps, headaches and dizziness. Potential side effects include angina pectoris, anxiety, depression, drowsiness, hyperglycemia, hyperuricemia, lassitude, leukopenia, nasal stuffiness, nightmare, purpura, urticaria, and weakness.

For full details, see the complete prescribing information.

Average Dosage: One tablet daily with breakfast.

Availability: Bottles of 100 and 1000 tablets.

*Chupkovich, V.; Finnerty, F. A., Jr., and Kakaviatos, N.: The value of chlorthalidone plus reserpine in moderately severe and severe hypertension: A two year study. Presented at the 7th Inter-American Congress of Cardiology, Montreal, June 14–19, 1964.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

RE-3455

HAWAII MEDICAL JOURNAL

Contents

Volume 25, Number 2, November-December, 1965

Articles

Thrombotic Thrombocytopenic Purpura: Report of a Case and Review of 157 Cases 93
Major Louis A. Casale, USA, MC

Circulatory Collapse Associated with Defective Catecholamine Metabolism 101
W. P. G. Jones, M.B., Ch.B.

Studies of Blood Groups, Immunoglobulins, and Isoagglutinins in Multiple Myeloma and Various Hematological Disorders in the Honolulu Area 106
Mitsuo Yokoyama, M.D., and Ann Stegmaier, MT(ASCP)BB, Fred I. Gilbert, Jr., M.D., Francis H. Fugunaga, M.D., and Young K. Paik, M.D.

Glucose-6-Phosphate Dehydrogenase Deficiency Associated with Hemoglobin H Disease 112
Robert T. S. Jim, M.D.

Technical Report: A Technique for Marking and Facilitating the Re-examination of Slides 114
Puncho Bicoy

Festschrift Honoring Dr. Max Levine

Observations on Cases of Enteropathogenic Bacterial Enteric Pathogens Among Hospitalized Children 118
Max Levine, Ph.D., Sc.D., James R. Enright, M.D., and George Ching, B.S.

The Home as a Biocenose: Children, Pets, and Disease 127
Norman D. Levine, Ph.D.

The Changing Role of Health Departments 134
Robert M. Worth, M.D., Ph.D.

The Antibody Response of Children with Enteropathogenic Escherichia Coli Infections 137
Erwin Netter, M.D.

Toxoplasmic Antibodies in Southern California and Polynesia 141
John F. Kessel, Ph.D., William P. Lewis, Ph.D., and Leon Jacobs, Ph.D.

Myeloma-type Globulin in Two Blood Donors 145
Gordon Dreesman, Ph.D., Charles Larson, B.A., and Albert A. Benedict, Ph.D.

Chiropteran (Bat) Rabies in North America 149
S. Edward Sulkin, Ph.D.

Intracerebral Virulence of Salmonella Typhi Strains in Chicks 154
Inn Soo Suh, M.D., Dr.Med.Sci., and Morris F. Shaffer, Ph.D.

Editorials

Medicare and the Physician's Responsibility 160
Medicare: What To Do About It 161

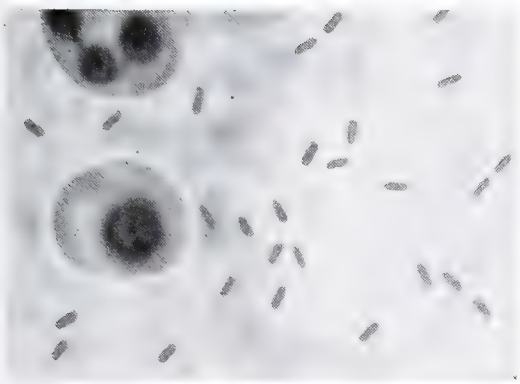
Features

Book Reviews 168
Bureau of Medical Economics 162
Hawaii Calendar 180
Hawaii Academy of General Practice 165
In Memoriam—Doctors of Hawaii—LVIII 164
New Members 166
Notes and News 169
President's Page 159
This Is What's New! 163

Hawaii Technologists' Bulletin

The President's Prerogative 172
Case Report: Immunology 172
Laboratory Administration at The Queen's Hospital 172

to clear an infected stream



treat the source with optimal dosage



NegGram®

Brand of

nalidixic acid

Treat the source. The gram-negative pathogens that cause most urinary tract infections. Treat them with a specific drug. NegGram. Clinical tests show that in adults two 500 mg. NegGram Caplets® orally four times a day will clear up most gram-negative urinary infections. Quickly...effectively...with minimal side effects.

Gram-negative urinary infection—cystitis, pyelitis, pyelonephritis, prostatitis, urethritis? Start first with NegGram..."a good 'starting' drug."[1] NegGram "...treatment may be first choice in potentially curable gram negative bacterial urinary infections."[2]

Indications: Urinary tract infections caused by gram-negative and some gram-positive organisms.

Side effects: Mainly mild, transient gastrointestinal disturbances; in occasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild eosinophilia, reversible subjective visual disturbances (overbrightness of lights, change in visual color perception, difficulty in focusing, decrease in visual acuity and double vision), and reversible photosensitivity reactions. Marked overdosage, coupled with certain predisposing factors, has produced brief convulsions in a few patients.

Precautions: As with all new drugs, blood and liver function tests are advisable during prolonged treatment. **Pending further experience, like most chemotherapeutic agents, this drug should not be given in the first trimester of pregnancy. It must be used cautiously in patients with liver disease or severe impairment of kidney function.** Because photosensitivity reactions have occurred in a small number of cases, patients should be cautioned to avoid unnecessary exposure to direct sunlight while receiving NegGram, and if a reaction occurs, therapy should be discontinued. The dosage recommended for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Bacterial resistance may develop.

When testing the urine for glucose in patients receiving NegGram, Clinistix® Reagent Strips or Tes-Tape® should be used since other reagents give a false-positive reaction.

Dosage: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times daily) for one to two weeks. Thereafter, if prolonged treatment is indicated, the dosage may be reduced to two Gm. daily. Children may be given approximately *25 mg. per pound* of body weight per day, administered in divided doses. The dosage recommended above for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Until further experience is gained, infants under 1 month should not be treated with the drug.

How supplied: Buff-colored, scored Caplets® of **500 mg. for adults,** conveniently available in bottles of 56 (sufficient for one full week of therapy) and in bottles of 1,000. **250 mg. for children,** available in bottles of 56 and 1,000.

References: (1) Carroll, G.: Urologists' Letter Club, June 1, 1964. (2) McDonald, D. F., and Short, H. B.: Address to the Fourth Interscience Conference on Antimicrobial Agents and Chemotherapy, New York, Oct. 26-28, 1964.

Winthrop

Winthrop Laboratories, New York, N.Y. 10016



And now.

· all you cold sufferers who've been looking for a cure-all.

ı can't cure a cold. We can't cure a cold. You can't cure a cold. But what you can do is relieve the symptoms, ıng the patient comfortable and the cold bearable.

patient suffering from head cold congestion, for instance, should breathe easier when you prescribe ıhistine LP.

ıhistine LP is a long-acting decongestant that helps restore normal mucus secretion and ciliary activity—physi-ıc mechanisms which prevent infection of the respiratory tract. Two tablets in the morning and two in the evening ɔrovide around-the-clock relief by helping to keep congested air passages clear, thus enabling your cold patient ıjoy normal and free breathing.

cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Tell ınts who operate machinery or motor vehicles drowsiness may result.

Novahistine LP tablet contains: phenyle-ıe hydrochloride, 25 mg., and chlorpheniramine ıate, 4 mg.

AN-MOORE
n of The Dow Chemical Company, Indianapolis, Indiana DOW

NOVAHISTINE® LP

For relief of nasal congestion.



"...it is extremely difficult and sometimes impossible to differentiate between 'pure depression' and anxiety and it is questionable whether depression without a certain degree of anxiety really exists."

Lehmann, H. E., Canad. Psychiat. Assn. J. *4(S)*: 1-12, 1959



An antidepressant designed for the clinical realities of office practice

As many physicians have reported, the large majority of neurotic depressed patients suffer from both depression and anxiety. It may be difficult to decide whether these patients are primarily depressed or primarily anxious. And yet drug treatment of only the symptom which seems more prominent may exacerbate the untreated element of the depression complex.

Consequently, it would seem that therapy specifically aimed at both the depression and associated anxiety and tension should increase success in treatment.

This is one of the important reasons why 'Deprol' has proved particularly helpful. For 'Deprol' acts rapidly both to lift the mood and to relieve the associated anxiety, tension and insomnia.

And side effects, at recommended dosage, have been infrequent and generally readily controlled.

Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

Supplied: Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.

Before prescribing, consult package circular. CD-5749

Deprol®

meprobamate 400 mg. +
benactyzine hydrochloride 1 mg.

WALLACE LABORATORIES / Cranbury, N. J.


Here, where you
most expect success,
your penicillin can fail.
Why?

Increasing evidence shows that penicillin-destroying staph may often co-exist with other primary pathogens and can cause your penicillin to fail.[1–3]

For example, investigators studying strep infections found that "...nose and throat cultures all consistently indicated a higher carrier rate of resistant Staph. aureus strains among treatment failures as opposed to treatment successes."[1]

They conclude: "This study [reported in the New England Journal of Medicine] demonstrates a basis for chemotherapeutic failure when organisms assumed to be penicillin susceptible are associated with penicillin-resistant Staph. aureus...."[1]

Now–unlike penicillin V and G– new Tegopen eradicates all four: strep, pneumo, staph...plus resistant staph

new TegoPen™

SODIUM CLOXACILLIN MONOHYDRATE

tonsillitis · otitis media · sinusitis · pharyngitis · bronchitis · pneumonitis

At a new low price–comparable to quality brands of penicillin V and G; approximately 33% less than erythromycin and triacetyloleandomycin.

Bristol Therapeutic Summary: For complete information, consult Official Package Circular. *Effectiveness:* Clinical experience with Tegopen has established it as an effective agent for the treatment of infections due to streptococci, pneumococci and staphylococci including penicillin G-resistant strains of the latter, against which it is particularly effective. *Side Effects:* Allergic manifestations (rashes, wheezing and sneezing, and eosinophilia) have been reported. As with any penicillin, an anaphylactoid response can occur. Gastrointestinal disturbances (nausea, epigastric distress, flatulence and loose stools) have been noted in some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients, the significance of which is unknown. *Precautions:* Allergic responses may occur, particularly if there has been prior allergic sensitization to penicillin or other allergens. Superinfections with nonsusceptible organisms may occur during therapy. *Usual Dose:* Adults: 250 mg. *q.* 6 *h.* for mild to moderate infections. 500 mg. *q.* 6 *h.* for more severe infections. Children: 50 mg. per Kg. per day in equally divided doses at six-hour intervals. Children weighing more than 20 Kg. (44 lbs.) should be dosed according to adult recommendations. Beta-hemolytic streptococcal infections should be treated for at least 10 days to help prevent the development of rheumatic fever or glomerulonephritis. *References:* 1. Kundsin, R.B., and Miller, J.M.: New England J. Med. *271*:1395 (Dec. 31) 1964. 2. Michael, T.M.; Michael, J.G., and Massell, B.F.: Am. J. M. Sc. *248*:152 (Aug.) 1964. 3. Bernstein, S.H.; Stillerman, M., and Allerhand, J.: J. Lab. & Clin. Med. *63*:14 (Jan.) 1964.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York

TRUST TO AMFAC DRUG FOR THE FINEST IN SERVICE AND SUPPLY

Always what you need -- when you need it!
SPECIAL DELIVERY SERVICE to Hawaii's Medical Profession
SAME-DAY Delivery . . . Scheduled Rural Deliveries



Charles Malang
MANAGER



Johnny Kawafuchi
Sales Manager



Kenny Hills
Salesman—Oahu



Frankie Fernandez
Salesman—Oahu



Hideo Kawabata
Salesman—Oahu



Bill Lindsey
Salesman—Oahu



Masaaki Sasaki
General Sales
—Hawaii



Yoriyoshi Hara
Salesman—Hawaii



Christine Oga
Inside Sales
—Oahu



Edna Sato
Inside Sales
—Oahu



Doris Uyeda
Inside Sales
—Oahu



Elizabeth Azevedo
Inside Sales
—Oahu



George Pereira
Buyer



Eileen Brenessel
Secretary



Charlie Freitas
Warehouseman



Donald Hangai
Warehouseman



Hans Yoshino
Warehouseman



Shiro Sodetani
Warehouseman

AMERICAN FACTORS
LIMITED

DRUG DEPARTMENT

667 POHUKAINA STREET / PHONE 585-531
BETWEEN 7:30 A.M. & 4:30 P.M. WEEKDAYS

Amaron Drug Co.
Ames Co., Inc.
Alcon Laboratories
Allergan Pharmaceutical
Astra Pharm. Products, Inc.
Ayerst Laboratories, Inc.
Barnes-Hind Laboratories
Becton-Dickinson & Company
Beutlich, Inc.
Bristol Laboratories
Brockway Glass Company
Burroughs Wellcome & Co.
Ciba Pharmaceutical Prod., Inc.
Davis & Geck Sutures
Drug Package Inc.
Eaton Laboratories
Endo Laboratories
Ethicon Inc.
Hynson, Westcott, Dunning
Johnson & Johnson
Kirkman Pharmacal Company
Lederle Laboratories
McNeil Laboratories
Mead-Johnson & Company
Merrell, William S.
Milex Products
Organon, Inc.
Ortho Pharmaceutical Corp.
Pacific Paper Products
Pfizer Laboratories
Ray-O-Vac Company
Riker Laboratories, Inc.
A. H. Robins Co., Inc.
Roche Laboratories
J. B. Roerig & Company
Sauter Laboratories
Schering Corp.
The Scholl Mfg. Co., Inc.
Searle & Co., G. D.
Smith, Kline & French Lab.
Stanlabs, Inc.
Tampax Inc.
Tidi Products
Vestal Laboratories, Inc.
Wallace Laboratories
Warner-Chilcott Lab.
Warren-Teed Pharmaceuticals
Westwood Pharmaceuticals
Winthrop Products, Inc.

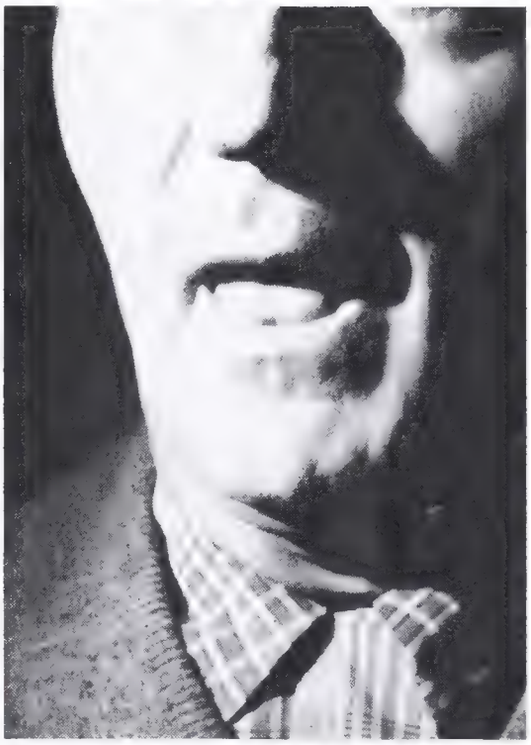
- **APPLICATORS**
- **DESENEX**
- **DRUG ENVELOPES**
- **ETHER**
- **LYSOL**
- **MAZON**
- **OINTMENT TINS**
- **OSYL**
- **Rx BOTTLES**
- **Rx FILES**
- **PILL BOXES**
- **TONGUE BLADES**
- **X-RAY FILMS AND SUPPLIES**











- momentary dizziness
- spontaneous falling
- faintness and weakness
- paralysis
- speech difficulties

when early warning symptoms[1] point to a diagnosis of cerebrovascular insufficiency, consider

VASODILAN®

(Isoxsuprine hydrochloride)

to increase cerebral blood flow[2-6]

Contraindications: There are no known contraindications to oral administration in recommended doses. **Cautions:** Do not give immediately postpartum or in the presence of arterial bleeding. Parenteral administration not recommended in the presence of hypotension or tachycardia. Avoid intramuscular doses above 10 mg. **Side effects:** Occasional palpitation and dizziness usually controllable by dosage adjustment. Brief hypotension or tachycardia may occur with intramuscular doses of 10 mg. or more. **Dosage and administration: Oral**—10 to 20 mg. (1 to 2 tablets) t.i.d. or q.i.d.; **I.M.**—5 to 10 mg. b.i.d. or t.i.d. For complete details on indications, dosage, administration, and clinical background, see product brochure, available on request from Mead Johnson Laboratories, Evansville, Indiana 47721.

References: (1) Abstract of Proceedings, Stroke Conference, Chicago (Feb. 14-16) 1963, prepared for use at National Stroke Congress, October 1964. (2) Blouin, L., and Overman, R. R.: Detailed reports in Mead Johnson Research Files.* (3) Gloning, K., and Klausberger, E. M.: Wien. klin. Wchnschr. **70**:145-149 (Feb.) 1958. (4) Whittier, J. R., and Dhrymiotis, A. D.: Angiology **13**:324-327 (July) 1962. (5) Horton, G. E., and Johnson, P. C., Jr.: Angiology **15**:70-74 (Feb.) 1964. (6) Whittier, J. R.: Angiology **15**:82-87 (Feb.) 1964. *Available upon request.

©1965 MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721

Mead Johnson Laboratories

Symbol of service in medicine

33065

When the nursing mother leaves the hospital...

Prescribe the new Similac® 20 Discharge Pack for a nursing mother

Frequently, nursing mothers experience interruptions to the feeding routine when social involvement, travel, nervous upset, illness or other circumstances occur. With Similac on hand, the baby's schedule can be maintained.



The New Discharge Pack provides the equivalent of ten 4-oz feedings, assuring the mother that a supportive food supply is available for the unforeseen situations which may arise.

The New Discharge Pack for nursing mothers contains four 4-oz bottles of ready-to-feed Similac (20 cal/oz), one presterilized nipple and one 13-oz can of concentrated Similac Liquid for subsequent feedings.

And in addition

—a tube of Mammol® for breast care.
—an informative booklet on the care of the breast, and breast-feeding technique, plus directions for the preparation of Similac feedings.



A new service from Ross— available from most hospitals.

ROSS LABORATORIES COLUMBUS, OHIO 43216

serving physicians who attend the needs of children from birth through adolescence

65 S 0-2262



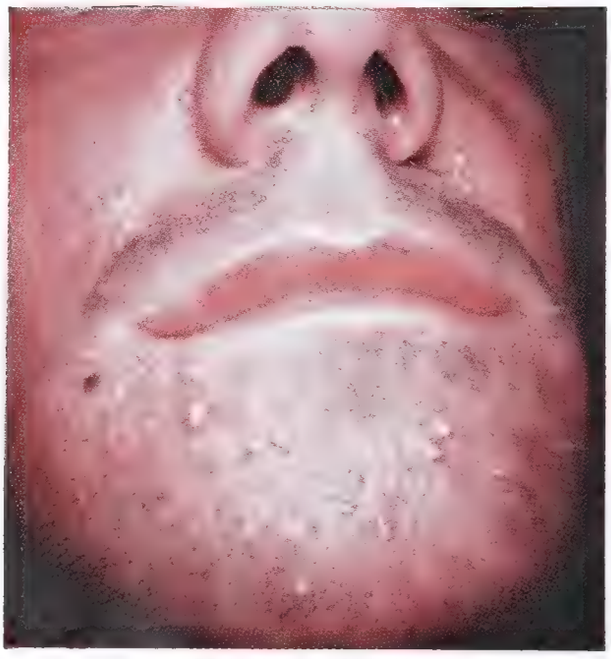
Tareyton...with the taste worth fighting for

America's largest-selling charcoal-tip cigarette

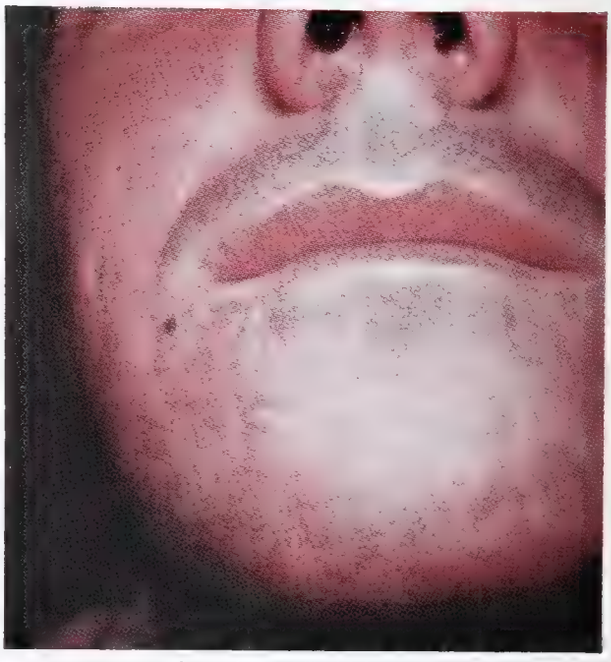
©The American Tobacco Company

TOPICAL TREATMENT

TYPICAL RESULTS



PRIMARY PYODERMA



AFTER TREATMENT WITH
'NEOSPORIN' ANTIBIOTIC OINTMENT
AND SALINE COMPRESSES

with 'NEOSPORIN'® brand

Polymyxin B-Neomycin-Bacitracin

ANTIBIOTIC OINTMENT

Each gram contains:

'Aerosporin'® brand Polymyxin B Sulfate 5,000 Units

Zinc Bacitracin 400 Units

Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) 5 mg.

Tubes of ½ oz. and 1 oz.

- clinically effective
- comprehensive bactericidal action against most Gram-negative and Gram-positive organisms, including Pseudomonas
- rarely sensitizes

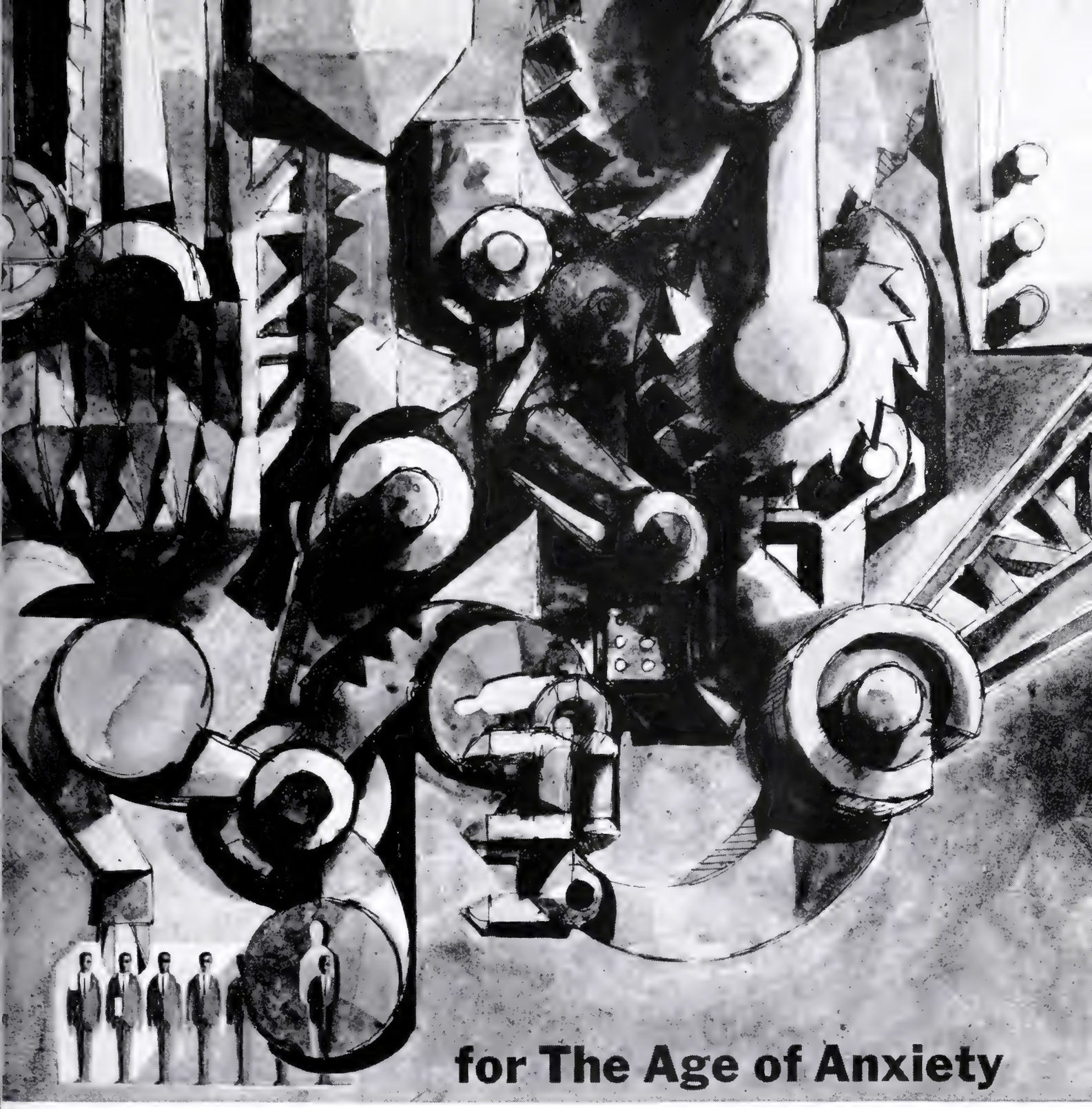
For the eradication of infectious organisms in a wide range of dermatologic disorders: impetigo, ecthyma, pyodermas, sycosis vulgaris, paronychia, traumatic lesions, eczema, herpes and seborrheic dermatitis. Prophylactically, for protection against bacterial contamination in burns, skin grafts, incisions and other clean lesions, abrasions and minor cuts and wounds.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

Contraindication: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York



For those who cannot cope realistically with the emotional turmoil and stress of modern living, the physician has at hand many valuable psychotherapeutic aids. One of the most useful is Librium, a pre-eminent prescription for excessive anxiety in this modern age.

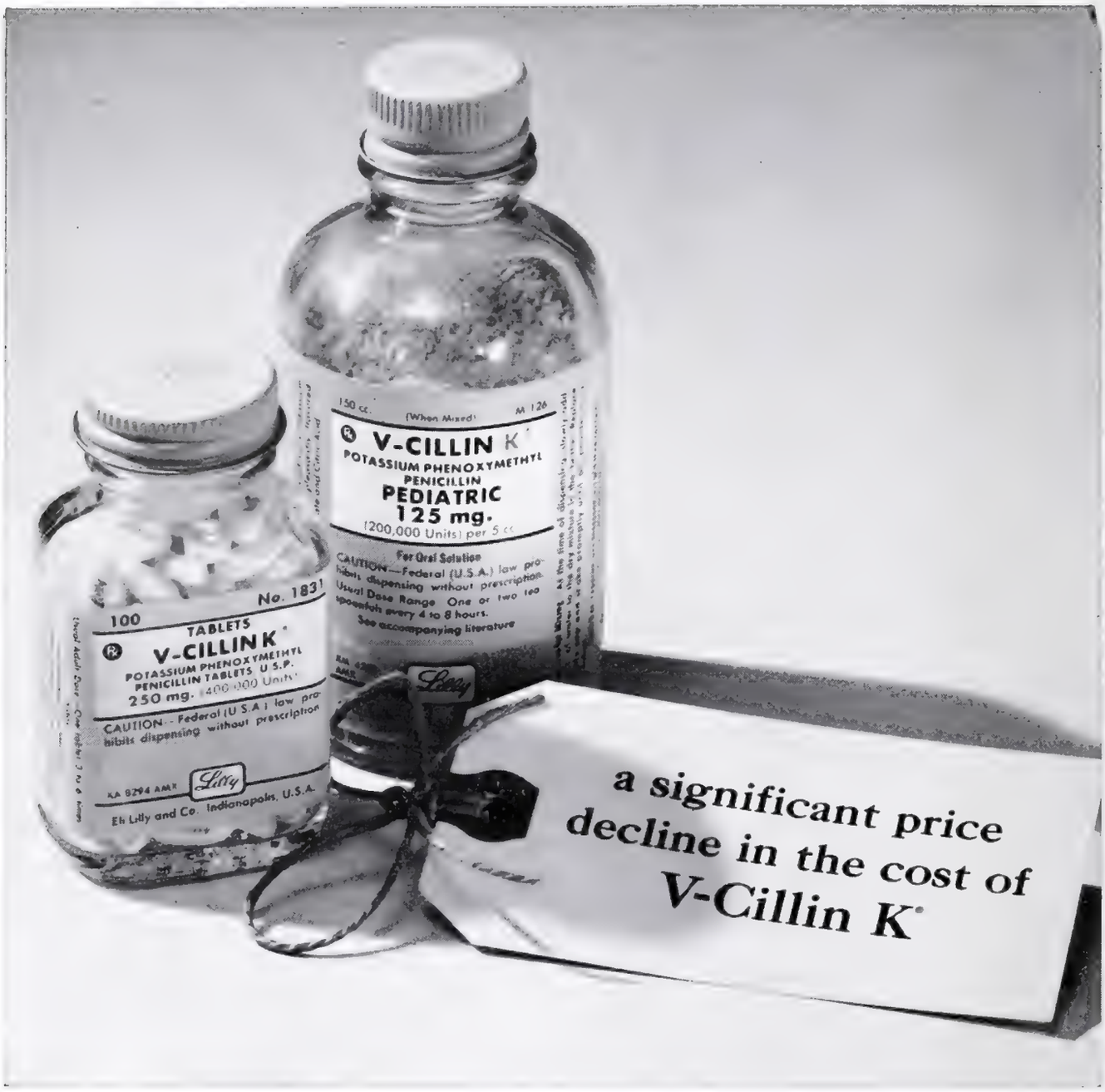
ROCHE

LIBRIUM® (chlordiazepoxide HCl)

5 mg 10 mg 25 mg capsules in #50's

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. **Side Effects:** Side effects, usually dose-related, include drowsiness, ataxia, minor skin rashes, edema, menstrual irregularities, nausea and constipation. When treatment is protracted, blood counts and liver function tests are advisable. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined. **Precautions:** Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, in long-term treatment and in presence of depression or suicidal tendencies. Exercise caution in administering drug to addiction-prone patients or those who might increase dosage; withdrawal symptoms, similar to those seen with barbiturates or meprobamate, can occur upon abrupt cessation after prolonged overdosage. Caution should be exercised in prescribing any therapeutic agent for pregnant patients. **Supplied:** Capsules, 5 mg, 10 mg and 25 mg, bottles of 50.

Roche Laboratories • Division of Hoffmann-La Roche Inc • Nutley, N.J. 07110



V-Cillin K now costs approximately 21 percent less. This significant price decline constitutes a substantial saving and still offers these important benefits over penicillin G:

The effectiveness of intramuscular penicillin. Just three 250-mg. doses daily provide total twenty-four-hour penicillin blood levels equal to those achieved by injection of 600,000 units of procaine penicillin G. A fourth dose increases daily penicillemia to levels 35 percent above those achieved by injection.

Consistent dependability—even in the presence of food. Comparative pharmacologic data show that V-Cillin K produces peak blood levels *twice* as high as those of penicillin G, with *half* the dose.

New, thin coating . . . new size and shape. The new coating eliminates the characteristically bitter taste of oral penicillin and makes V-Cillin K tablets easy to swallow. The new shape makes them easy for physicians and pharmacists to identify.

Indications: V-Cillin K is an antibiotic useful in the treatment of streptococcus, pneumococcus, and gonococcus infections and infections caused by sensitive strains of staphylococci.

Contraindications and Precautions: Although sensitivity reactions are much less common after oral than after parenteral administration, V-Cillin K should not be administered to patients with a history of allergy to penicillin. As with any antibiotic, observation for overgrowth of nonsusceptible organisms during treatment is important.

Usual Dosage Range: 125 mg. (200,000 units) three times a day to 250 mg. every four hours.

Supplied: Tablets V-Cillin K, 125 or 250 mg., and V-Cillin K, Pediatric, 125 mg. per 5-cc. teaspoonful, in 40, 80, and 150-cc.-size packages.

V-Cillin K®

Potassium Phenoxymethyl Penicillin

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana.

Lilly

500990

Knowledge of how to suspect and diagnose this rare disorder, and treat it, could well be life saving.

Thrombotic Thrombocytopenic Purpura: Report of a Case and Review of 157 Cases

MAJOR LOUIS A. CASALE, USA, MC,* *Honolulu*

• *Fever, thrombocytopenia, hemolytic anemia, neurologic symptoms, and hematuria or proteinuria should suggest the diagnosis of TTP—thrombotic thrombocytopenic purpura. Lymph node biopsy should permit a positive diagnosis to be made. High doses of corticosteroids are urgently indicated. Even with them, the mortality is close to 50 per cent; with other treatment it is 60 to 90 per cent. About half the deaths occur within two weeks of hospitalization.*

SINCE THE first clinical description of a case of thrombotic thrombocytopenic purpura by Moschowitz[1] in 1925, frequent case reports have evidenced increasing interest in the disease.

Its etiology has remained an enigma. Originally it was considered a hematologic disorder; more recently there has been a dawning realization that the hematologic abnormalities are secondary. Confusion about the basic pathology of a disease is always reflected by the changing nomenclature. Cases have been reported under descriptive or morphologic names: thrombotic acroangiothrombosis, thrombocytopenic thrombocytic microangiothrombosis, generalized platelet thrombosis, platelet thrombosis syndrome, thrombotic microangiopathy, microangiopathic hemolytic anemia, and, most commonly, thrombotic thrombocytopenic purpura or TTP.

Herein is presented a patient's history of interest because of the method of diagnosis, mode of therapy, and duration of survival, together with a review of 157 cases from the literature.

CASE REPORT

A 31-year-old Puerto Rican man was admitted to Walter Reed General Hospital on January 22, 1962. He had been in good health until two weeks before admission when he developed a low grade fever, sore throat, epistaxis, and rhinorrhea. Penicillin was given and the patient appeared to improve. After one week, he developed a pruritic eruption. Within 24 hours, a generalized petechial rash appeared, with associated melena, mahogany-colored urine, and epigastric pain.

He was then admitted to a local medical facility with dyspnea and severe constrictive chest pain. White count was 20,000/mm^3, with 64 neutrophils, 4% bands, 27% lymphs, 2% monocytes, 3% basophiles; hematocrit 40%; Hgb 15 gm/100 ml; reticulocyte count 4.6%; platelet count normal. Urinalysis showed 2+ protein, sugar 0, 3-5 WBC/hpf, 3-5 RBC/hpf, and many granular casts. BUN was 20 mgm/100 ml, total bilirubin 7.7 mgm/100 ml with 0.1 mgm direct (conjugated). Alkaline phosphatase and serum transaminase levels were normal. EKG revealed ST-T wave changes compatible with acute pericarditis. Smear of bone marrow aspirate was normal except for a decreased number of megakaryocytes.

A diagnosis of systemic lupus erythematosus was considered, although LE factor was not found. During this 15-day period of hospitalization, nine units of whole blood was given. On the final day of

* U. S. Army Tripler General Hospital, APO 438.

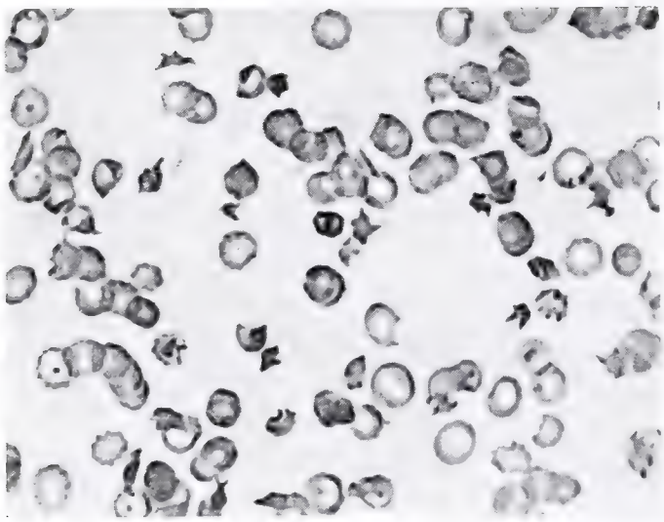


FIG. 1.—*Peripheral smear demonstrating helmet cells and fragmentation of red blood cells.*

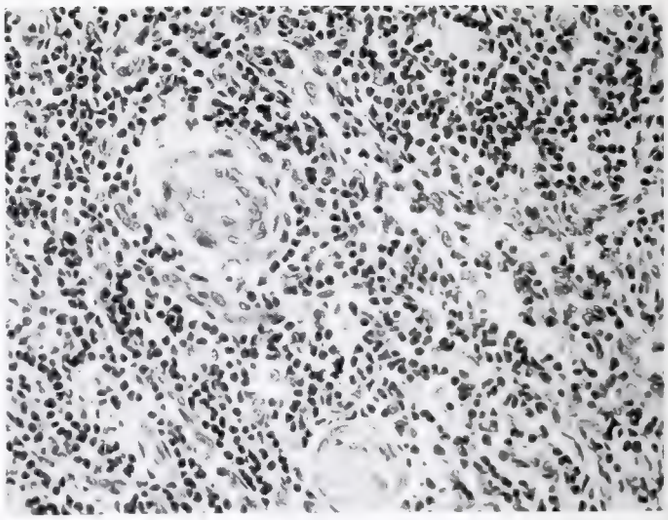


FIG. 2.—*Inguinal node biopsy demonstrating hyaline thrombi with intimal proliferation.*

hospitalization prednisone, 15 mgm four times a day, was started.

The patient was then transferred to Walter Reed General Hospital, where, upon arrival, he appeared acutely ill. Physical examination revealed generalized petechiae and ecchymoses, and slight scleral icterus. There were no other pertinent physical findings. On admission, WBC was 58,000/mm^3 with 64% neutrophils, 33% lymphs, 1% eos. Hematocrit was 26%, hgb 9.2 gm%, platelet count 9,000/mm^3, reticulocyte count 4.9%. Total bilirubin was 2.9 mgm/100 ml, with 0.3 direct. Urinalysis showed gross hematuria with a trace of albumin, negative sugar, and elevated urobilinogen. Stool was guaiac 4+. Direct and indirect Coombs tests were negative. LE factor and nucleoprotein complement fixation tests were negative. Lumbar puncture was normal.

Gross blood was aspirated from his stomach by Levin tube at the time of admissions. Upper GI radiographs were normal. In the first 48 hours the patient was given four units of whole blood. On the second day he had a generalized seizure with a temperature elevation to 104°. Following this episode the patient became comatose. A second spinal tap was normal. Blood cultures were negative. Peripheral smear demonstrated marked fragmentation of red blood cells with many "helmet cells" (Fig. 1).

At that time a diagnosis of thrombotic thrombocytopenic purpura (TTP) was seriously entertained. A 1.5 x 1 cm superficial inguinal lymph node was obtained for biopsy. The diagnosis of TTP was confirmed on the basis of thrombi within the small arterioles and capillaries with characteristic vessel wall changes (Fig. 2).

Hydrocortisone intravenously, 125 mgms every four hours, was started. By the fourth day the patient was afebrile and alert. However, hematuria and ecchymoses persisted; fresh petechiae continued to appear. The thrombocytopenia was unrelenting. On the seventh day, there being no improvement in the hematologic status, a splenectomy was performed. Microscopic changes in the spleen were characteristic of TTP (Fig. 3). Following surgery there was gradual improvement in the patient's hematologic status. Hydrocortisone was maintained for several days and then dosage was tapered off gradually. The patient was discharged seven weeks following admission on no medication; hematocrit, hemoglobin, reticulocyte count, WBC, peripheral smear and urinalysis were normal. One year later the patient was still in clinical and hematological remission.

AGE, SEX, RACE

Of the 157 cases reviewed from the literature, the youngest patient was six weeks old[2] (although there is some doubt as to the accuracy of the diagnosis); the oldest was 77.[3] There were 94 females and 63 males in the group, a sex ratio of approximately 3:2 (Table 1). The highest incidence of the disease was in the 25-to-34 age group in both sexes. In the pediatric group, the ratio of females: males appeared greater than in the total group. There were 26 Negro patients, 14 of whom were females. One Oriental was present in the series.

There was sufficient information in 149 of the case reports to permit some estimate of the duration of symptoms before admission to the hospital. Symptoms of less than one week's duration were present in 26 patients. In 76, symptoms were present from one week to one month; in 22, from five to 12 weeks; in four, from 13 to 24 weeks; in five, from 25 to 52 weeks. In 16 patients, symptoms had been present for more than one year before admission. Two patients had had symptoms for as

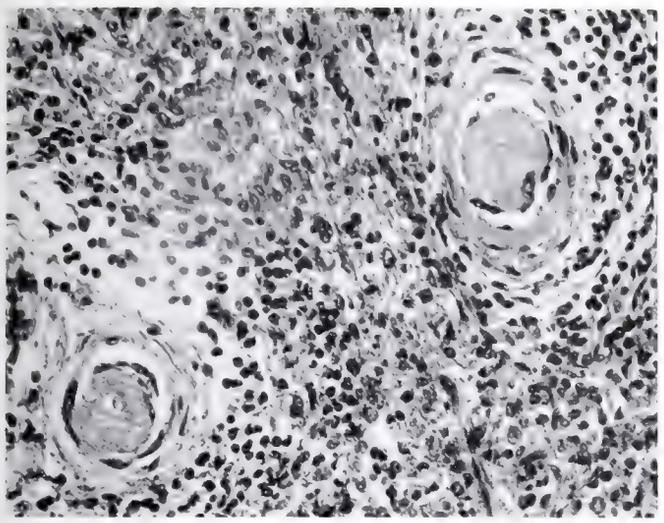


FIG. 3.—*Section of spleen demonstrating hyaline thrombi with intimal proliferation.*

long as eight years.[4, 5] In those instances when the disease did not have a distinctly acute onset, it was not possible to be certain that early symptoms were definitely related to the TTP.

THREE GROUPS DISCERNED

When the disease had a distinct, acute onset, symptoms and signs appeared to fall into three groups identified by: (1) petechiae, ecchymoses, hematuria, epistaxis, or gastrointestinal bleeding; (2) neurological signs, including confusion, generalized or focal seizures, delirium, stupor, coma, aphasia, hemiparesis, or cranial nerve palsies; and (3) nonspecific signs, such as low-grade fever, myalgia, arthralgia, malaise, and headache. In one patient the disease presented as a psychiatric illness.[6]

The diagnosis in the latter group of patients was usually "URI," and the treatment usually symptomatic or with antibiotics, or both. It is these patients, presenting an ill-defined picture and given antibiotics, who represent a most confusing category. When the TTP became manifest, it was often construed as toxicity of the therapeutic agents employed. Rather than having an etiologic relationship, the drug was coincidental with the natural onset of the basic disease.

TABLE 1.—*Number of cases and sex distribution for various age groups.*

AGE GROUP	FEMALES	MALES
–5	7	3
6–15	14	5
16–24	18	9
25–34	27	19
35–44	15	10
45–54	7	11
55–64	5	3
65–74	0	3
75 +	1	0
	94	63
TOTAL	157	

TABLE 2.—*Drugs received prior to onset of acute symptoms.*

Penicillin	6[3, 7–10]	Tetanus toxoid	1[24]
Sulfa	13[11–21]	Polio vaccine	1[25]
Pen+Sulfa	1[7]	Antihistamine	1[26]
Pen+Strept	1[3]	Tetanus antitoxin	1[27]
Tetracycline	1[22]		
Iodine			

"ALLERGIC" FACTORS

A history of penicillin allergy was recorded in three cases. Two patients had chronic eczema; a third had a history of chronic urticaria. Table 2 lists various agents employed before the onset of the acute illness. In some instances they were considered to be responsible for the development of the disease. Of the 22 patients who had received an antibacterial agent, in 13 it was a sulfa drug. In one case iodine was believed to be responsible for the onset of the disorder. Immunization injections were given in three cases. One patient had received an antihistamine. One case followed prolonged contact with paints and solvents. Our patient developed an allergic reaction to penicillin, followed shortly by the acute manifestations. It is tempting to relate all these to the drug. It became evident, however, that the original symptoms for which the patient was being treated were the nonspecific prodromata frequently preceding TTP.

FAMILY HISTORY

Two patients had brothers with a diagnosis of periarteritis[28, 29]; a third had a sister with lupus erythematosus.[30]

PHYSICAL EXAMINATION

Fever: Fever occurred in 143 patients at some time during their period in the hospital; six remained afebrile. In eight, no mention was made of temperature. It was not unusual for hyperpyrexia to develop as a preterminal event. No distinctive temperature pattern specific for TTP could be derived from the data reviewed.

Liver and Spleen: When hepatomegaly or splenomegaly was present, it was usually regarded as of minimal degree. Of 126 patients in whom liver size was documented, there were 50 (39 per cent) with enlargement. In 131 patients in whom spleen size was recorded 40 (30 per cent) had splenomegaly.

Jaundice: Mild clinical icterus was common; it was present in 94 (73 per cent) of 128 patients.

Adenopathy: Minimal adenopathy was recorded in only a few patients, usually in the cervical area. Adenopathy of this minimal extent may not be related to TTP. Significant generalized lymph node

TABLE 3.—*Laboratory findings.*

	PRESENT	ABSENT	NOT RECORDED
Anemia	152	2	3
Reticulocytosis	98	3	56
Thrombocytopenia	138	5	14
Pos. L.E. prep	6	44	107
Leukocytosis	85	64	8
Pos. Coombs	3	70	84
Proteinuria	103	22	32
Hematuria	102	27	28
Azotemia	61	31	65

enlargement was seen in two cases. Thus it would seem safe to conclude that significant adenopathy is at least a rare finding in TTP.

Purpura: Purpuric manifestations were a common physical finding upon admission. In a small percentage, purpura was not present at the time of admission but developed later. No mention was made of purpura in five of the 157 patients. In the remaining 152, all but 14 demonstrated some evidence of bleeding as petechiae, ecchymoses, retinal hemorrhage, epistaxis, melena, hematemesis, gross hematuria, or vaginal bleeding. Extensive hemorrhagic gangrene of the skin and subcutaneous tissue was recorded in one patient[31]; the presence of several healed eschars in a second[32] may have represented vestiges of the same phenomenon.

LABORATORY FINDINGS

Red Cells: Anemia was very common, frequently with associated reticulocytosis and elevation of the indirect bilirubin. Red blood cell survival time was usually shortened.[32, 33] Normal cells infused into patients with TTP have decreased survival.[34] Osmotic and mechanical fragility have been reported as normal or increased. Lysolecithin and acid fragility studies have usually been normal.

A most significant finding in the peripheral smear is unusually extensive fragmentation of erythrocytes, with the presence of peculiar triangle-shaped, burr-shaped, and helmet-shaped cells. The discovery of helmet cells in the peripheral smear of our patient led to serious consideration of TTP. However, these distinctive poikilocytes are not pathognomonic, since they have also been observed in severe uremia, disseminated carcinomatosis, and periarteritis nodosa. Brain, Dacie, and Hourihane[35] attempted to relate the degree of morphologic change in red blood cells to the level of hemoglobin, blood urea nitrogen, electrolyte changes, and vascular alterations. The only correlation that they could find was with the vascular change. They concluded that the common link between the hemolytic anemia and the underlying disease was the vessel changes, except in carcinomatosis, where the anemia was related to tumor emboli. The morphologic changes in the red blood cells were interpreted as being due to contact between red blood cells and the diseased vessels. The peripheral smear from our patient (Fig. 1) demonstrates helmet-shaped cells.

Platelets: Of the 138 patients in whom quantitative platelet status was described, five had normal direct counts. However, in several patients, platelet counts had been done infrequently during the hospital course. It is of interest that four of the five had no evidence of bleeding. Adelson *et al.*[34] transfused platelet-rich plasma into two patients with TTP; rapid platelet destruction was demonstrated. Infusion of 250 cc of plasma from a TTP patient into a normal control had no effect. Platelet iso- and auto-agglutinins were sought without success. In a third patient, however, Adelson and Stefanini[36] were able to demonstrate active platelet cell destruction; they also identified an agglutinin of the Forssman type which was active against sheep red blood cells and heterologous platelets but not against human platelets. They considered this to be an effect of the hemolytic anemia and thrombocytopenia rather than a cause.

Bone marrow findings usually were typical of erythroid hyperplasia with normal or increased megakaryocytes. Platelet formation was usually described as either normal or increased; rarely it was decreased. No morphologic abnormalities in any cell series were described.

LE Test: Fifty patients had LE cell tests performed sometime during their hospital course. In five cases[4, 37-40] a positive LE cell preparation was obtained; all were females. Two of these patients died during their initial hospitalization. One of these patients was found to have wire loop changes in the kidney; the other had verrucal vegetations of the mitral and aortic valves at necropsy. The three survivors were followed from 16 months to three years after the diagnosis of TTP had been established. One patient who was followed for 32 months had a negative LE cell test when first hospitalized; it became positive after splenectomy. The second patient was followed for three years; she also had a negative LE test on the first admission. Following the development of polyarthritis, Raynaud's syndrome, and pleural effusion, the LE cell test became positive. In three patients who had negative LE cell tests at necropsy, a diagnosis of lupus erythematosus and TTP was confirmed.[18, 27] Meacham reported a case of chronic discoid lupus associated with TTP.[41]

Two cases of TTP occurring with periarteritis nodosa were reported by Beritea *et al.*[42] and Wal-

lace.[7] Rheumatoid spondylitis and TTP has been seen in one instance.[43] Two patients have been reported with a long history of rheumatoid arthritis prior to the development of TTP; one had a positive LE cell test.[4, 44]

Purpura: Clotting time is usually normal; bleeding time is usually prolonged. Abnormal clot retraction and positive tourniquet test occur in most instances; these are anticipated events consonant with the profound thrombocytopenia. Three cases had decreased plasma fibrinogen levels.[13, 45, 46] The true incidence of hypofibrinogenemia cannot be ascertained since it was looked for so infrequently. In instances where clotting time is prolonged, hypofibrinogenemia should be considered since it is an easily correctible defect. Whether the mechanism is related to decreased hepatic synthesis or excessive fibrinogen utilization is unknown.

Leukocytosis: A white blood cell count over 10,000/mm^3 was present in 85 of the 149 patients in which it was recorded. Over 30,000/mm^3 was observed in eight patients; in three of these a leukemoid reaction was present with levels over 50,000/mm^3.[21, 47, 48] The differential index in patients with leukocytosis was not remarkable. Leukopenia was present in four cases; leukoagglutinins were demonstrated in one of these.[45]

Coombs Test: A positive Coombs reaction is so unusual in TTP that its presence should cause careful reconsideration of the diagnosis. In the three positive reactions recorded, one of them occurred in a patient with a positive LE cell test.[38] In a second patient the LE cell test was negative[5]; in the third, it was not performed.[49] If the decreased red blood survival is due to the increased fragmentation, as postulated by Brain and Dacie,[35] it would be expected that the Coombs reaction would be negative.

Urinalysis: Proteinuria and hematuria were common findings in this series; 79 per cent had hematuria and 82 per cent proteinuria. Only 13 patients had urine free of protein and blood. In most instances where there was mention of the urinary sediment, fine and coarsely granular inclusion casts were noted. Glycosuria was observed in 11 cases. As will be seen subsequently, this is probably a result of pancreatic changes which were detected at necropsy. In several cases a concomitant glucose infusion may have caused false positive reactions.

TABLE 4.—*Tissue from which antemortem diagnosis was made in 15 cases.*

Lymph node	3
Lymph node and marrow	1
Kidney	1
Skin	1
Skin and muscle	1
Tissue from D&C	1
Muscle	1
Breast	1
Bone marrow	4
Appendix	1
TOTAL	15

Azotemia: Significant azotemia was considered if the BUN was over 25 mgm% or the NPN over 40 mgm%. Sixty-one (66 per cent) of the 92 patients in which either was recorded had elevated BUN or NPN levels. It is possible that in some of these patients at least the presence of gastrointestinal bleeding contributed to the azotemia. Renal failure occurred in three patients.

MISCELLANY

Raynaud's syndrome was noted in three cases. In one of these the LE cell test was positive[37]; it was negative in the other two.[49, 50] Three cases of TTP have been recorded in which the onset of the disease appeared to be related to a surgical procedure.[3, 44] Varicella and rubeola have occasionally preceded the onset of TTP.[51, 52]

Pregnancy appears to have an adverse effect on TTP. Six patients were pregnant at the time the disease became acutely manifest.[8, 38, 52, 53] All had spontaneous abortions and died during their initial hospitalization. A seventh patient developed TTP four days postpartum, also with fatal termination.[54] There is no evidence to indicate whether the disease was present in a latent state and underwent acute exacerbation precipitated by pregnancy or whether the TTP began during pregnancy.

In three patients the onset of their disease appeared related to excessive exposure to sun.[20, 45] One of these, presented by Lazlo,[4] had had rheumatoid arthritis for eight years; following several weeks of sunbathing, she was hospitalized with acute symptoms of TTP. This patient had a positive LE preparation.

HISTOLOGIC DIAGNOSIS

An antemortem tissue diagnosis was established in 15 cases. This includes the patient reported here and excludes those instances where splenectomy was performed, since in this latter group the spleen almost always contained characteristic vessel changes. Table 5 lists the tissues from which a diagnosis was made. Retrospective diagnoses

TABLE 5.—*Duration of hospitalization prior to death.*

Less than 48 hours	17
3–14 days	69
15–30 days	27
Greater than 30 days	20
No mention	7
TOTAL	140

were made from the breast tissue removed at time of biopsy[17] and the appendix removed from patient during surgery for "acute abdomen," at which time hematoma of the ovary was found and appendectomy was incidental.[20] Tissue obtained at time of D&C was noted to contain findings suggestive of TTP.[20] Bone marrow examination was positive in five cases, with paraffin sections more productive than simple smears.[9, 43, 55-56] Of the three instances where lymph node biopsy was confirmative,[20, 43, 48] an axillary node was utilized in two. Kidney biopsy was positive in one case.[45] Skin biopsy, although performed relatively often, was positive in only two instances[18, 57]; in one of these muscle biopsy was also positive, and in a second patient diagnosis was confirmed with muscle biopsy.[58]

It would seem that the tissue most apt to give information is a lymph node. There need not be palpable adenopathy, as is evidenced by the case reported here. This is not surprising, since when deep lymph nodes are examined at necropsy the typical vessel changes can easily be demonstrated.

SURVIVAL

Of the 157 patients, 17 were able to be discharged from the hospital. Two patients were lost to follow-up shortly after discharge. The remaining 15 were followed from 16 months to nine years. One of these patients died three years after the initial diagnosis. Among the 140 patients who died during their initial hospitalization were included several who had more than one hospital admission within a span of several months. Table 5 gives a summary of the duration of hospitalization prior to death. It indicates that TTP can be rapidly fatal; about 11 per cent died within 48 hours following admission to the hospital. Sixty-one per cent of the patients died within two weeks of admission. In seven cases insufficient information was provided to permit an accurate estimation of the duration of hospitalization.

THERAPY

Table 6 compares the treatment employed in the 17 surviving patients and in the 140 patients who died during the acute phase of their illness. It is difficult to assess with accuracy any form of therapy in this type of study for many reasons. One important fact is that quite often the more vigorous forms of therapy were utilized as a desperation measure in a patient who was already moribund. Even allowing for the shortcomings and inherent inaccuracies of a retrospective study, the best form of current therapy would seem to be the use of corticosteroids in doses greater than 60 mgm of prednisone (or its equivalent) per day.

However, as demonstrated by the case presented, a high dose of corticosteroids plus splenectomy may be successful. Since only two other patients were treated by this combined technique early in the course of the disease, and both died, one cannot cite any specific form of treatment as being superior in TTP.

PATHOLOGY

Lukes,[59] in reviewing the pathologic findings in 49 cases, noted that the characteristic vascular changes of TTP appeared in specific anatomic sites adjacent to highly vascular tissue. The major areas of involvement were the myocardium, adrenal glands, posterior pituitary, pancreas, and central nervous system. Other organs were involved but in most instances had fewer vascular lesions per unit area.

In this review of 157 cases, pancreatic islet cell necrosis was reported in five cases.[26, 27, 54, 60, 61] This was manifested clinically by glycosuria, elevated serum amylase levels, or frank diabetes mellitus requiring insulin therapy.

Verrucal vegetations of heart valves were noted in 15 cases. The aortic and mitral valves were most commonly involved. These vegetations have been described as similar to those seen in nonbacterial (marantic) endocarditis and in several other cases as reminiscent of those seen in lupus erythematosus.

Two of the 15 patients presented clinical evidence of occlusion of a major vessel[13, 62]; a third had retinal vessel thrombosis[63]; a fourth was found to have cerebral and pulmonary infarcts at necropsy.[41] Another patient was admitted with

TABLE 6.—*Survival in relation to methods of treatment used.*

		NO. SURVIVING
Steroids	38	6
Splenectomy	9	2
Steroids+Splenectomy	15	3
High-dose steroids*	12	5
High-dose steroids+Splenectomy	3	1
Other	78	0
Anticoagulants	2	0
TOTAL	157	17

* High-dose steroids—greater than 60 mgm prednisone (or its equivalent) per day.

brachial artery occlusion; she was living at the time of the case report and the etiology was not determined.[25] This latter case was not included in the fifteen.

A pertinent lesson to be derived is that although TTP is a disease of small blood vessels, occlusion of a major vessel does not discount the diagnosis but suggests the presence of verrucal vegetations of the heart valves.

Petechiae of the myocardial surface are not uncommon, so that a pericardial friction rub and EKG changes of pericarditis may be present, as occurred in the case reported.

In the kidneys, the cortical vessels are most commonly involved. Rarely, the involvement is of such severity that cortical necrosis ensues.[51] Vassa[62] noted the afferent arterioles to be commonly involved with occasional extension into the glomerular tuft. Proliferative glomerulitis has also been described.

The most common area of brain involvement is the gray matter. O'Brien[8] noted that when the white matter was damaged it was usually adjacent to an area of marked cortical involvement. The gray matter surrounding the involved vessels may demonstrate variable changes. This ranges from little histologic alteration to necrosis of ganglion cells and occasional areas of cystic degeneration. Petechiae over the cortex are not uncommon. Intracerebral hemorrhage is rare; it has been recorded in two instances, one massive.[20, 41] Subarachnoid bleeding has been documented in several instances.[29, 64]

DISCUSSION

In the first reported case of TTP, Moschcowitz believed the vascular lesion to be due to thrombosis of the precapillary arteriole composed of agglutinated or degenerated red blood cells. Following the demonstration of a granular appearance to the thrombi by Baehr, Klemperer, and Schifrin,[65] it was believed that the thrombi were composed of agglutinated platelets. Further credence was given this concept by the thrombocytopenia which was documented in these cases. Subsequently, attention was focused on the blood vessel wall changes by the work of Altschule,[66] who noted that the capillary damage may antedate the thrombotic lesion. Orbison[67] in 1952 clearly demonstrated aneurysmal changes in the involved vessels and similar changes in vessels in which intraluminal thrombi were not present.

A substantial contribution to the nature of the intraluminal material was made by Craig and Gitlin.[51] They demonstrated the thrombi in two cases of TTP to react specifically to fluorescein-labeled rabbit anti–human fibrin antibodies. The thrombi were negative or only occasionally (and then partially) positive for fibrin when the tissues were stained by standard dye staining procedures. The thrombi failed to react with fluorescein-labeled rabbit anti–human platelet antibodies. They concluded that the thrombi in TTP were composed of a saline-insoluble derivative of fibrinogen or fibrin.

Meachem *et al.*[41] performed comparative cytological reactions on centrifuged platelets, vascular occlusions from a case of TTP, and certain degenerative vascular lesions (arteriolar necrosis, polyarteritis, and amyloid). They concluded that the tests are not specific and do not tell whether platelet material is present in the occlusive lesions.

Probably the most accurate study on the histogenesis of the lesion in TTP was by Gore in 1950.[68] He demonstrated that the first step was a segmental accumulation of "hyaline material" beneath the endothelium of arterioles and (occasionally) capillaries. Swelling of this material probably occurs by imbibition, since edema of the adjacent vessel walls was noted. This resulted in partial occlusion of the lumen; the endothelial surface is intact at this point. Next there was a break in the endothelium with a tendency for the thrombus to propagate; this is followed by a proliferative reaction of the endothelium in an attempt to encompass and organize the thrombus. Platelets then adhere to the "hyaline substance" which has ruptured through the vessel wall. What factor provokes the initial deposition of this substance under the endothelium remains to be explained.

Moore and Schoenberg[69] have demonstrated an accumulation of acid polysaccharide similar to chondroitin sulfate or hyaluronic acid in the vascular lesions. Since they have also demonstrated the ability of endothelial cells to elaborate a connective tissue mucopolysaccharide,[70] this is further evidence that changes in the endothelium play a primary role in the evaluation of the disease.

It is probably a valid conclusion that TTP is not a primary hematologic disorder. If one has a tendency to be a "lumper," this disease should be included in the collagen or vascular group of diseases. A positive family history for collagen disease in a small number of patients, the presence of tissue changes in some patients of both systemic lupus erythematosus and TTP, the positive LE cell tests noted, and the development of TTP in two patients with rheumatoid arthritis, offer some basis for this concept.

SUMMARY

A 31-year-old man had a diagnosis of TTP established on the basis of a superficial inguinal lymph node biopsy. He responded dramatically to splenectomy and high doses of prednisone.

The diagnosis of TTP should be considered in the presence of fever, thrombocytopenia, hemolytic anemia, neurologic symptoms, and proteinuria or hematuria. The value of lymph node biopsy for unequivocal tissue diagnosis is emphasized.

A plea for early tissue diagnosis and vigorous therapeutic intervention with corticosteroids in high dosage is made. This probably represents the best form of therapy at present, but it is suggested that the combination of splenectomy and corticosteroid administration should be given a more extensive clinical trial. ■

REFERENCES

1. Moschowitz, E.: An acute pleiochromic anemia with hyaline thrombosis of the terminal arterioles and capillaries, Arch. Intern. Med. 36:89 (July) 1925.
2. Van Darle, F., and Moraux, L.: Purpura thrombopenique (maladie die Moschowitz) curable chez un nourrisson, Le Scalpel 115:103 (Feb.) 1962.
3. Tennant, R., and McAdams, G.: Thrombotic thrombocytopenic purpura associated with surgery, Med. 29:644 (Sept.) 1958.
4. Laszlo, M. H., Alvarez, A., and Feldman, F.: Association of TTP with lupus erythematosus Ann. Intern. Med. 42:1308 (June) 1955.
5. Baez-Villasenor, J., and Ambrosius, K.: Report of a case with some unusual characteristics, Ann. Intern. Med. 46:378 (Feb.) 1957.
6. Goldenberg, P. T., Thayer, J., and Hastings, L.: Febrile thrombopenic purpura with hemolytic anemia and platelet thrombosis, New Eng. J. Med. 243:252 (Aug. 17) 1950.
7. Wallace, D. C.: Diffuse disseminated platelet thrombosis, Med. J. Aust. 2:9 (July) 1951.
8. O'Brien, J. L., and Sibley, W.: Neurologic manifestations of TTP, Neurology 8:55 (Jan.) 1958.
9. Cooper, T., Stickney, J. Pease, G., and Bennett, H.: TTP, confirmation of clinical diagnosis by bone marrow aspiration, Amer. J. Med. 13:374 (Sept.) 1952.
10. Wasserman, E.: TTP, a review, Amer. J. Med. 24:648 (Apr.) 1958.
11. Amick, L. D.: Purpuric anemia (TTP), J. Iowa Med. Soc. 44:254 (June) 1954.
12. Katz, K., and Jackler, J.: TTP, a case report, Boston Med. Quart. 6:118 (Dec.) 1955.
13. Dickenman, R. C., Brown, H., Hiratzka T., and Vetne, G.: TTP, associated with afibrinogenemia, J. Mich. Med. Soc. 54: 1421 (Dec.) 1955.
14. Bernstock, L.: TTP, treatment with heparin, Lancet 1:28 (Jan.) 1960.
15. Singer, K., Motulsky, A., and Shanberg, J.: TTP, studies on hemolytic syndrome in this disease, Blood 5:434 (May) 1950.
16. Nausobarum, N., and Dameshek, W.: Transient TTP with probable meningococcemia New Eng. J. Med. 256:448 (Mar. 7) 1957.
17. Lorber, J., and Emery, J.: TTP, Proc. Roy. Soc. Med. 52:301 (Apr.) 1959.
18. Beigelman, P. M.: Variants of the platelet thrombosis syndrome and their relationship to disseminated L. E., Arch. Path. 51:213 (Feb.) 1951.
19. Fitzgerald, P., Auerbach, O., and Frame E.: Thrombocytic acroangiothrombosis, Blood 2:519 (Nov.) 1947.
20. Symmers, W.: Thrombocytic microangiopathy and histologic diagnosis during life, Lancet 270:592 (May) 1956.
21. Engel, G., Scheinken, M., and Humphrey, D.: Acute febrile anemia and thrombocytopenic purpura with vasothrombosis, Ann. Intern. Med. 26:919 (June) 1947.
22. Killelea, D. E : TTP, Bull. Tulane Med. Fac. 20:93 (Feb.) 1961.
23. Ehrich, W. E., and Seifter, J.: Thrombocytic purpura caused by iodine, Arch. Path. 47:446 (May) 1949.
24. Antes, E. H.: TTP, report of a case and review of the literature, Ann. Intern. Med. 48:512 (Mar.) 1958.
25. Hill, J. M.: Massive hormonal therapy and splenectomy in acute TTP, J.A.M.A. 173:778 (June) 1960.
26. Berlin, I., Sinclair, C., Richman, L., and Read, W.: TTP, Virginia Med. Monthly 84:293 (June) 1957.
27. Barondess J. A.: TTP, report of a case and review of the literature, Amer. J. Med. 13:294 (Sept.) 1952.
28. Bernheim, A.: Widespread capillary and arteriolar platelet thrombi, J. Mount Sinai Hosp. 10:287 (May) 1943.
29. Green, M., and Rosenthal, S.: Generalized blood platelet thrombosis, J. Mount Sinai Hosp. 16:100 (July) 1949.
30. Sharnoff, J. G.: TTP, report of 3 cases, Amer. J. Med. 23:740 (Nov.) 1957.
31. Luttgens, W. P.: TTP with excessive gangrene of skin and subcutaneous tissue, Ann. Intern. Med. 46:1207 (June) 1957.
32. Swaiman, K., Schaffhausen, M., and Krivit, W.: TTP, report of an unusual clinical case and CR-51 red cell survival studies, J. Pediat. 60:823 (June) 1962.
33. Epstein, L.: TTP, Med J. Aust. 44:458 (Sept.) 1957.
34. Adelson, E., Heitzman E., and Fennessey, J.: Thrombo-hemolytic thrombocytopenic purpura, Arch. Intern. Med. 94:42 (July) 1952.
35. Brain, M. C., Dacie, J. V., and Hourihane, O. B.: Microangiopathic hemolytic anemia, Brit. J. Haemat. 8:358 (Oct.) 1962.
36. Adelson, E., and Stefanini, M.: Demonstration and characterization of a heterologous platelet agglutinin, Blood 7:700 (July) 1952.
37. Kosloske, A. M., and Pisciotta, A.: The syndrome of TTP as the presenting manifestation in systemic lupus erythematosus, Marquette Med. Rev. 27:6 (Nov.) 1961.
38. Chung, E. E., and Gomez-Acebo, J.: TTP a report of two cases with some unusual features, Georgetown Med. Bull. 14:137 (Nov.) 1960.
39. Rubinstein, M. A., Kagan, B. M., MacGilluiray, M., Merliss, R., and Sacks, H.: Unusual remission in a case of TTP following blood exchange transfusion, Ann. Intern. Med. 51:1409 (Dec.) 1959.
40. Seigel, B. M.: TTP and L.E., Ann. Intern. Med. 47:1022 (Nov.) 1957.
41. Meacham, J., Orbison J., Heinle, R., Steele, H., and Schaefer, J.: TTP, a disseminated disease of arterioles, Blood 6:706 (Aug.) 1951.
42. Wallace, D.: Diffuse disseminated platelet thrombosis, Med. J. Aust. 2:9 (July) 1951.
43. Moey, D., White, J., and Dailey, W.: TTP diagnosis by random lymph node biopsy, Arch. Intern. Med. 98:821 (Dec.) 1956.
44. Clinical pathologic conference, New Eng. J. Med. 269:577 (Sept.) 1963.
45. Bukowski M. J., and Koblenzer, P.: TTP, report of a case with unusual features of hypofibrinogenemia and leukopenia, J. Pediat. 60:84 (Jan.) 1962.
46. Reisfield, D.: TTP and pregnancy, Obstet. Gynec. Survey 14: 303 (June) 1959.
47. Durantes, S., and Soto, R.: TTP, Bol. Med. Hosp. Infant. Mex. 17:199 (Mar.) 1960.
48. Robinson, M. J., Orchard, N. P., and Eden, A. R.: Thrombotic microangiopathic hemolytic anemia, Arch. Dis. Child. 33:520 (Dec.) 1958.
49. Ritz, N. D.: TTP with positive Coombs Test, Amer. J. Med. 21:468 (Sept.) 1956.
50. Gendel, B. R., Young, J. and Kraus, A.: TTP, Amer. J. Med. 13:3 (July) 1952.
51. Craig, J., and Gitlin, D.: Nature of hyaline thrombi in TTP, Amer. J. Path. 33:251 (Mar.) 1957.
52. Reisfield, D. R.: Death from TTP during pregnancy, Obstet. Gynec. 19:517 (Apr.) 1962.
53. O'Leary, J. A., and Marchetti, A. A.: TTP in pregnancy, Amer. J. Obstet. Gynec. 83:214 (May) 1962.
54. Harrison, H.: TTP Occurring in the puerperium with associated pancreatic islet cell necrosis, Arch. Intern. Med. 102:124 (July) 1958.
55. Parsons, D. W., Tweeddale, D. N., and Larsen, L.: TTP, report of a case, J. Kentucky Med. Ass. 60:856 (Sept.) 1962.
56. Wile, S., and Sturgeon, P.: TTP, report of 3 cases in children, Pediatrics 17:882 (June) 1956.
57. Scalfe, L., Bruzzese, L., and Piomelli, S.: Trombotica trombocitopenica cronica, intermittente, Menerva Med. 48:2821 (Sept.) 1957.
58. Burke, H. A., and Hartmann R.: TTP, remission with large amounts of steroids, Arch. Intern. Med. 103:105 (Jan.) 1959.
59. Lukes, R. J., Roth, C. E., and Steussey, C. N.: TTP, clinical and pathologic findings in 49 cases, Proc. Amer. Soc. Hem., 1960.
60. Heffner, R., Kahn, E., and Schraft, W.: TTP, New York J. Med. 54:111 (Jan.) 1954.
61. Comess, O. H. and Oyanada, A.: Anemia and disseminated platelet cell thrombosis. Report of a case due to malignant nephrosclerosis with acute pancreatitis, Arch. Intern. Med. 89: 802 (May) 1952.
62. Vassar, P., and Spain, D.: Platelet thrombosis syndrome, Circulation 8:664 (Nov.) 1953.
63. Cahalane, S.: TTP of long duration, Amer. J. Med. 27:333 (Aug.) 1959.
64. Singer, K., Bornstein, F., and Wile, S.: TTP. Hemorrhagic diathesis with generalized platelet thrombosis, Blood 2:542 (Nov.) 1947.
65. Baehr, G., Klemperer, P., and Schifrin, A.: An acute febrile anemia and thrombocytopenic purpura with diffuse platelet thromboses of capillaries and arterioles, Trans. Ass. Amer. Physicians 51:43-58, 1936.
66. Altschule, M.: A rare type of acute thrombocytopenic purpura. Widespread formation of platelet thrombi in capillaries, New Eng. J. Med. 227:477 (Sept. 24) 1942.
67. Orbison, J. L.: Morphology of TTP with demonstration of aneurysm, Amer. J. Path. 28:129 (Jan.-Feb.) 1952.
68. Gore, T.: Disseminated arteriolar and capillary platelet thrombosis. A morphologic study of its histogenesis, Amer. J. Path. 26:155 (Jan.) 1950.
69. Moore, R. D., and Schoenberg, M.: A polysaccharide component of the vascular lesions of TTP, Blood 15:511 (Apr.) 1960.
70. Moore, R. D., and Schoenberg, M.: The relations of mucopolysaccharide of vessel wells to elastic fibers and endothelial cells, J. Path. and Bact. 77:163 (Jan.) 1959.

In both phenylketonuria and familial dysautonomia, endogenous norepinephrine is lacking and there is a predictable exaggeration of the response to injected norepinephrine.

Circulatory Collapse Associated with Defective Catecholamine Metabolism*

W. P. G. JONES, M.B., Ch.B., *Honolulu*

• *Phenylketonurics cannot convert phenylalanine to tyrosine, and, as one result, cannot maintain normal plasma levels of catecholamines, epinephrine and norepinephrine. They over-react to injected norepinephrine. The diminished vanillylmandelic acid (VMA) excretion characteristic of familial dysautonomia suggests a similar deficiency. Overreactivity in patients with this disorder has been observed. Patients with either syndrome must be guarded carefully against the increased hazard of severe hypotension and cardiac arrest during general anesthesia.*

THE ADVANCING FRONTIERS of medical knowledge have recently enabled the correlation of many clinical observations with basic biochemical changes. Such a correlation is demonstrated in the field of pharmacogenetics—the study of how genetic changes may affect the response to certain drugs. These studies indicate that the basic defect in many well-known inherited disorders is a biochemical one, affecting some essential metabolic pathway. This biochemical deficit often presents as an abnormal response to the administration of some specific pharmacological agent, thereby meriting the attention of the anesthesiologist.

Of particular interest and concern are the anomalies of catecholamine metabolism found in two genetically determined disorders—phenylketonuria and familial dysautonomia (Riley-Day syndrome).

Phenylketonuria[1] is a disorder of amino acid metabolism, characterized by the excretion of large amounts of phenylpyruvic acid in the urine. The disorder is inherited as an autosomal recessive

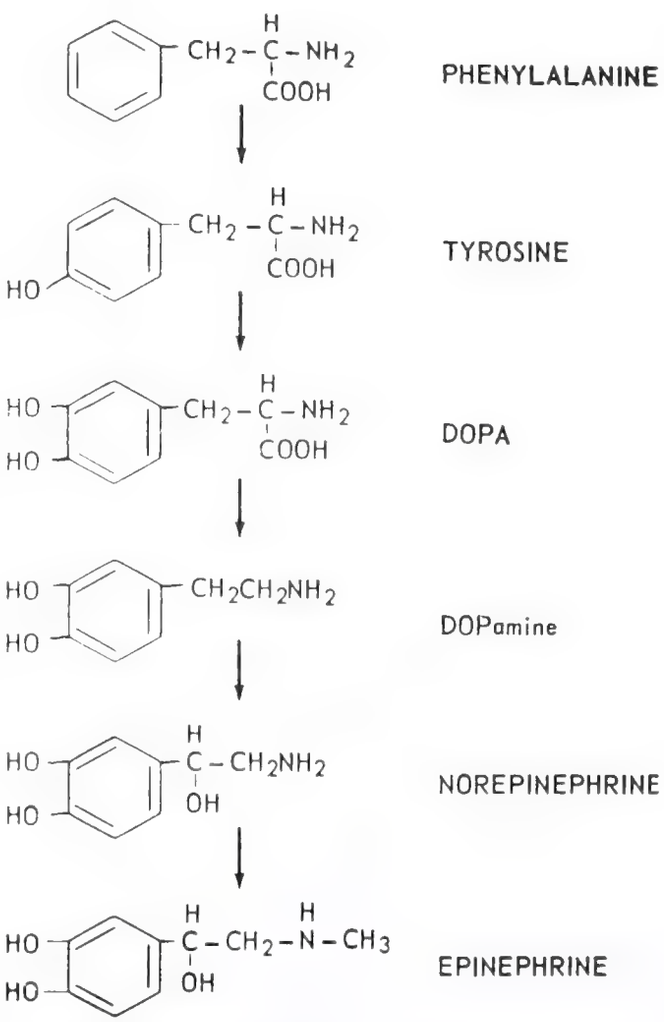


FIG. 1.—*Normal biosynthesis of the catecholamines.*

From the Department of Anesthesiology, Straub Clinic, Honolulu, Hawaii.
Present address—The Queen's Hospital, Honolulu, Hawaii.
* Adapted from a paper read at The Third World Congress of Anesthesiology, São Paulo, Brazil, September 21, 1964.

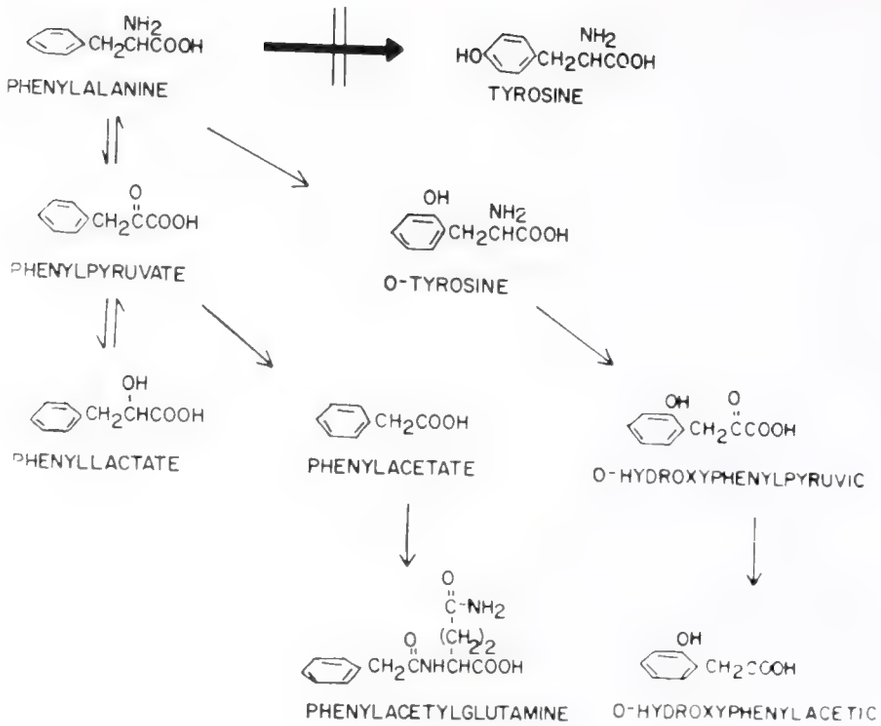


FIG. 2.—*Accumulation of phenylalanine and its breakdown products in phenylketonuria.*

gene with an incidence in the general population between 1:25,000 and 1:40,000. The most obvious clinical finding is mental deficiency. It is estimated that one per cent of all mental defectives are afflicted with phenylketonuria. Associated findings are defective myelination of the central nervous system, hypertonicity, ataxia, epilepsy, eczema, and emotional disturbances.

The syndrome of familial dysautonomia was first described by Riley[2] in 1949. It appears to be transmitted as an autosomal recessive trait and affects predominantly, but not exclusively, children of Jewish parentage. Characteristic features of the syndrome are defective lacrimation, excessive sweating, postural hypotension with paroxysmal hypertension during excitement, and a relative indifference to pain.[3]

Both of these disorders are associated with inborn errors of catecholamine metabolism that could adversely affect the cardiovascular stress response which is normally initiated following the administration of anesthetic agents. The attenuation of this vital reflex could conceivably precipitate acute hypotension and occasionally sudden cardiac arrest during the course of administration of anesthetic.

CATECHOLAMINE METABOLISM

In order to rationally anticipate any anesthetic difficulties which may arise, an understanding of normal and abnormal catecholamine metabolism is mandatory. Figure 1 illustrates the normal biosynthesis of epinephrine and norepinephrine from the essential amino acid, phenylalanine.

It is apparent that catecholamine synthesis proceeds through a number of intermediate stages, each stage requiring a specific enzyme for its completion. For example, the conversion of phenylalanine to tyrosine requires the presence of the enzyme, phenylalanine-hydroxylase; the change from dopa (dihydroxyphenylalanine) to dopamine is catalyzed by another specific enzyme, dopa-decarboxylase.

In phenylketonuria, a congenital absence of phenylalanine-hydroxylase inhibits the conversion of phenylalanine to tyrosine. This produces a marked increase in the blood level of phenylalanine and its metabolic breakdown products (Fig. 2).

Important effects of this accumulation of phenylalanine and its derivatives are diminished intestinal absorption of other essential amino-acids[4] and decreased conversion of dopa to dopamine, probably by inhibition of dopa-decarboxylase.[5] The end result is decreased plasma levels of epinephrine and norepinephrine with reduced urinary excretion of dopamine, epinephrine, and norepinephrine.[6]

Apparently phenylketonurics may have a decrease in the level of circulating catecholamines, leading to inadequate stimulation of the adrenergic receptors in the cardiovascular system. According to Cannon's law of denervation,[7] this should re-

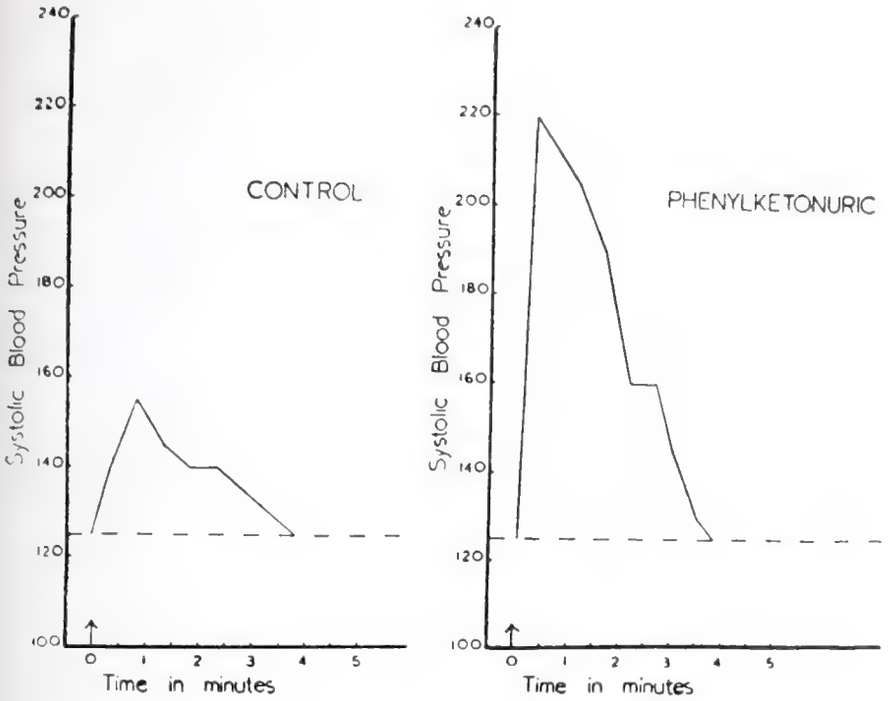


FIG. 3.—*Pressor response to infusion of epinephrine in phenylketonuria. (From Cawte, J. E., Phenylketonuria. Med. J. Aust. 11:15, 1954. Reproduced by permission of the author.)*

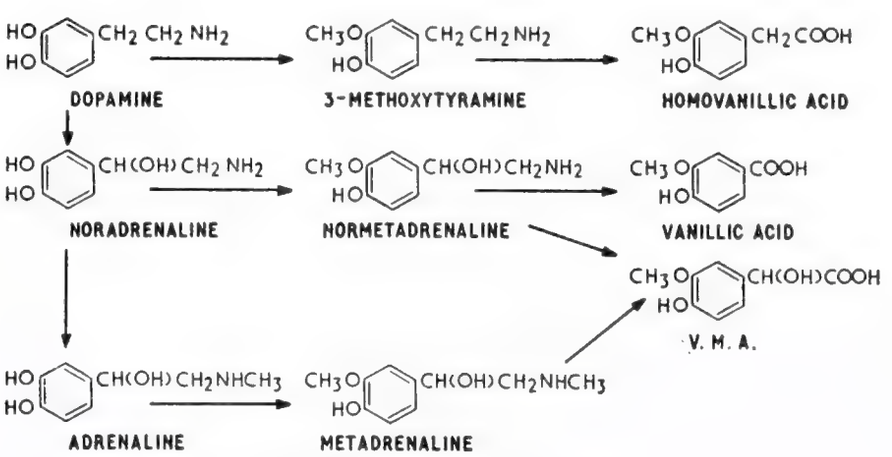
sult in enhanced responsiveness of these receptors to exogenous catecholamines. Cawte[8] confirmed this hypothesis by observing an exaggerated pressor response to infusion of epinephrine in phenylketonuria (Fig. 3).

The normal metabolic breakdown of the catecholamines is shown in Figure 4. Epinephrine and norepinephrine are converted to vanillylmandelic acid (VMA) which is then excreted in the urine, while their immediate precursor, dopamine, is broken down and excreted as homovanillic acid (HVA).

In familial dysautonomia, abnormal catecholamine metabolism is indicated by a diminished excretion of vanillylmandelic acid, associated with an increased excretion of homovanillic acid.[9] This diminished excretion of VMA implies a deficiency of circulating epinephrine and norepinephrine. Such a deficit could be due to inadequate synthesis because of failure in the hydroxylation of dopamine to norepinephrine, or alternatively, from inability to release these catecholamines from storage sites in the body. Again Cannon's law should apply; this has been confirmed by the work of Smith and Dancis,[10] who noted an exaggerated pressor response to infusion of norepinephrine in these patients (Fig. 5). This mechanism could explain the apparent paradox of postural hypotension associated with a labile hypertension following excitation or painful stimulation.

Further evidence that epinephrine and norepinephrine production is physiologically inadequate is supplied by Geltzer and co-workers,[11] who demonstrated postural hypotension associated with failure to increase VMA excretion in a dysautonomic in-

FIG. 4.—*Normal breakdown of the catecholamines.*



Metabolism of the catecholamines.

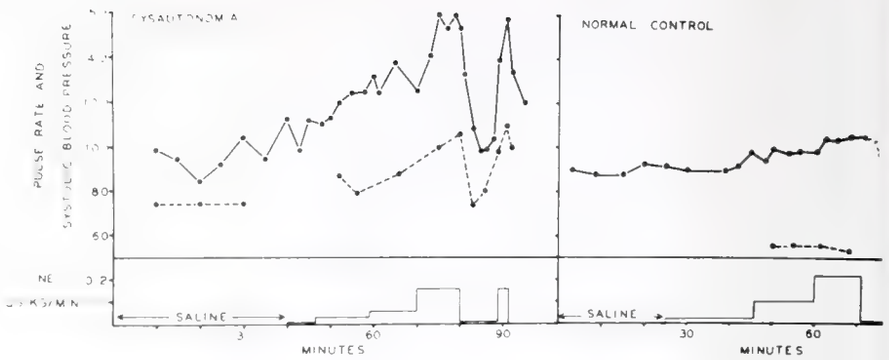


FIG. 5.—*Pressor response to infusion of norepinephrine in dysautonomia. (From Smith and Dancis, Exaggerated response to infused norepinephrine in Familial Dysautonomia. New Eng. J. Med. 270:704, 1964. Reproduced by permission of the authors and the Editor, New England Journal of Medicine.)*

fant. The same patient showed defective gluconeogenesis by the insulin tolerance test; this was corrected by administration of exogenous epinephrine. A failure to produce sufficient epinephrine following a physiological stimulus is also indicated here.

It is apparent that while the primary biochemical disturbances of catecholamine metabolism differ in phenylketonuria and familial dysautonomia, the ultimate effect on the cardiovascular system is the same, namely, a relative deficiency of circulating epinephrine and norepinephrine, with enhanced responsiveness of the adrenergic receptors to infusion of exogenous catecholamines.

CLINICAL IMPLICATIONS

Anesthetic agents are protoplasmic poisons. Induction of general anesthesia with any of the commonly-used inhalants or intravenous agents results in myocardial depression and a fall in cardiac output, nitrous oxide being the sole exception.[12] If the vascular tree is considered an extension of the myocardium, it follows that a similar depression of the smooth muscle of the arterioles and venules occurs, leading to peripheral pooling of blood and decreased venous return to the heart. These depressant effects, if not counteracted, would result in profound hypotension and ultimately cardiac arrest.

In the normal, intact state these adverse actions on the cardiovascular system are antagonized, counteracted, and largely reversed by the initiation of the cardiovascular stress response (sympathoadrenal response) which follows the induction of anesthesia.[13] Activation of the sympathoadrenal response initiates reflex release of catecholamines from storage sites in the myocardium, vascular tree, and adrenal medulla. This catecholamine release stimulates the alpha and beta adrenergic receptors in the heart and vessels so that muscular contractility is restored and cardiovascular homeostasis maintained.

In phenylketonuria and dysautonomia, due to defective catecholamine metabolism, there exists the possibility of inadequate stimulation of these receptors during the stress of anesthesia. Theoretically, this could lead to profound hypotension and occasionally cardiac arrest during the course of anesthesia and operation. Strong support for this hypothesis is found in the observations of Kritchman *et al.*[14] In their paper on problems associated with general anesthesia in familial dysautonomia, they reported on eight patients who received a total of 27 anesthetics for a variety of surgical procedures. Postural hypotension was present prior to operation in all cases. Severe hypotension under anesthesia was noted on six occasions, and cardiac arrest occurred twice. These findings emphasize the serious anesthetic hazards in these patients and point up the difficulties which might be encountered when general anesthesia is induced in the presence of an ineffective reflex sympathoadrenal response.

Unfortunately, there is little information regarding anesthetic difficulties in patients with phenylketonuria. Smith[15] does mention one child who suffered a cardiac arrest during an operation for the correction of strabismus, performed under ether anesthesia. This dearth of clinical data is undoubtedly the direct outcome of the tendency, in previous years, to incarcerate these unfortunate patients in institutions for the mentally retarded, where many died at an early age from tuberculosis and other infectious diseases.

More recently, however, there has been a marked improvement in the general medical care of mental defectives. The anesthesiologist can, therefore, anticipate having to deal with increasing numbers of phenylketonurics requiring surgery. Purely on biochemical and pharmacological grounds, the difficulties which may be encountered in maintaining cardiovascular homeostasis in such patients necessitate extreme caution in their management.

ANESTHETIC MANAGEMENT

By reason of the emotional disturbances associated with their disease, patients with phenylketonuria and familial dysautonomia are generally unsuitable for any type of local or regional technique; thus general anesthesia is mandatory. In order to avoid myocardial depression, the nitrous oxide–oxygen relaxant sequence is the method of choice for the induction and maintenance of anesthesia. Due to their profound depressant effects, the intravenous barbiturates and Halothane are specifically contraindicated.

Adequate atropinization is essential prior to induction, as vagal blockade potentiates the pressor effect of circulating catecholamines.[16] This effect is produced by release of vagally-mediated baroreceptor restraint on the chronotropic action of norepinephrine.

In dysautonomia, the presence of postural hypotension necessitates great care in avoiding sudden postural changes under anesthesia. When an operation does not involve the abdomen or lower limbs, the use of the anti-gravity suit[17] is recommended.

Severe hypotension not related to blood loss must be immediately corrected by the infusion of a vasopressor of the direct-acting type such as phenylephrine, methoxamine, or norepinephrine. Direct-acting vasopressors are those which directly stimulate the adrenergic constrictor receptors. Because of the enhanced sensitivity of these receptors, somewhat less than the usual dose of vasopressor can be expected to give an adequate pressor response. If cardiac arrest occurs it should be treated by closed cardiac massage, 100 per cent oxygen, and the intravenous infusion of norepinephrine and glucose.

SUMMARY

Patients suffering from phenylketonuria and familial dysautonomia have associated abnormalities of catecholamine metabolism. Biochemical and pharmacological tests suggest a chronic deficit of circulating catecholamines with enhanced responsiveness of the adrenergic receptors to infusion of exogenous catecholamines. This apparent deficiency of endogenous catecholamines raises the possibility of an impaired sympathoadrenal response during the induction and maintenance of general anesthesia.

Clinical observations in patients with dysautonomia support this hypothesis, severe hypotension have been noted on six occasions and cardiac arrest twice in a series of 27 anesthesias reported by Kritchman. In the case of phenylketonuria, insufficient clinical data are available to determine whether these patients have an inadequate sympathoadrenal response. However, the anesthesiologist must assume that such an inadequacy exists until more information can be obtained.

In the management of these cases, the anesthesiologist is faced with the problem of preventing cardiovascular decompensation in the presence of an attenuated sympathoadrenal stress response. The nitrous oxide–oxygen relaxant sequence is recommended. Care should be taken to avoid severe hypotension by the jndicious use of vasopressors of the "direct-acting" type. ■

REFERENCES

1. Nyhan, W. L.: Genetic defects of amino-acid metabolism, Pediat. Clin. N. Amer. 10:339 (May) 1963.
2. Riley, C. M., Day, R. L., Greeley D. McL., and Langford, W. S.: Central autonomic dysfunction with defective lacrimation: report of 5 cases, Pediatrics 3:468 (Apr.) 1949.
3. Riley, C. M., Freedman, A. M., and Langford, W. S.: Further observations in familial dysautonomia, Pediatrics 14:475 (Nov.) 1954.
4. Linneweh, F., Ehrlich, M., Graul, E. H., and Hundeshagen, H.: Über den Aminosaüren-Transport bei phenylketonurischer Oligophrenie Klin. Wschr. 41:253 (Mar. 15) 1963.
5. Fellman J. H.: Inhibition of DOPA decarboxylase by aromatic acids associated with phenylpyruvic oligophrenia, Proc. Soc. Exp. Biol. Med. 93:413 (Dec.) 1956.
6. Nadler, H. L., and Hsia, D. Y.: Epinephrine metabolism in phenylketonuria, Proc. Soc. Exp. Biol. Med. 107:721 (Aug.-Sept.) 1961.
7. Cannon, W. B., and Rosenblueth, A.: Supersensitivity of denervated structures: law of denervation, New York, MacMillan, 1949. Chapter 2.
8. Cawte, J. E.: Phenylketonuria, Med. J. Aust. Vol. II:15 (July 3) 1954.
9. Smith, A. A., Taylor, T. and Wortis, S. B.: Abnormal catecholamine metabolism in familial dysautonomia, New Eng. J. Med. 268:705 (Mar. 28) 1963.
10. Smith, A. A., and Dancis, J.: Exaggerated response to infused norepinephrine in familial dysautonomia, New Eng. J. Med. 270:704 (Apr. 2) 1964.
11. Geltzer, A. I., Gluck, L., Talner, N. S., and Polesky, H. F.: Familial dysautonomia, New Eng. J. Med. 271:436-440 (Aug. 27) 1964.
12. Price, H. L.: General anesthesia and circulatory homeostasis, Physiol. Rev. 40:187 (Apr.) 1960.
13. LeRoy Crandell D.: The adrenergic mechanism. Clinical Anesthesia, 1963, Philadelphia, F. A. Davis, Chapter 3.
14. Kritchman, M. M., Schwartz, H., and Papper, E. M.: Experiences with general anesthesia in patients with familial dysautonomia, J.A.M.A. 170:529 (May 30) 1959.
15. Smith, R. M.: Anesthesia for infants and children (2d edition). St. Louis, C. V. Mosby, 1963. Page 366.
16. Swan, H. J. C.: Effect of noradrenaline on human circulation, Lancet 2:508 (Sept. 17) 1949.
17. Gardner, W. J., and John, D. F.: The antigravity suit (G-suit) in surgery, J.A.M.A. 162:274 (Sept. 22) 1956.

The high gamma globulin levels typical of multiple myeloma are due to abnormal, immunologically inactive globulin.

Studies of Blood Groups, Immunoglobulins and Isoagglutinins in Multiple Myeloma and Various Hematological Disorders In the Honolulu Area

MITSUO YOKOYAMA, M.D., & ANN STEGMAIER, MT(ASCP)BB,*
FRED I. GILBERT, JR., M.D.,† FRANCIS H. FUKUNAGA, M.D.,‡
and YOUNG K. PAIK, M.D.,§ *Honolulu*

• *Isoagglutinin titers anti-A and anti-B, and immunoglobulin levels, were determined on sera from nine patients with multiple myeloma, and from 27 patients with various hematologic and collagen disorders. In multiple myeloma no correlation was found between gamma globulin concentrations and isoagglutinin titers. Decreased I-antigen reactivity was found in red blood cells from some of the patients with blood disorders.*

NEOPLASTIC and collagen diseases have recently been observed to be frequent causes of decreased or absent serum isoagglutinin levels secondary to altered gamma globulin production.[1-5] The term "antibody deficiency syndrome" is used in those cases where the malignancy also impairs the immune response to antigenic stimuli, much as agammaglobulinemia does.

Multiple myeloma is a neoplasm characterized by the proliferation of an abnormal plasma cell. These cells elaborate one or more distinctive proteins, which have the same mobility as normal gamma globulins but are distinguished by their electrophoretic and ultracentrifugal homogeneity as well as by differences in the amino acid distributions.

In the present study, we investigated the electrophoretic, immunochemical, and serologic characteristics of sera in multiple myeloma and various other blood disorders found on Oahu.

MATERIALS AND METHODS

Blood samples from nine patients with multiple myeloma were obtained from Kuakini Hospital, Straub Clinic, and St. Francis Hospital. Sera from patients with various hematological disorders and rheumatoid arthritis patients were also obtained from the above hospitals and from other clinics in Honolulu.

The serum proteins were analyzed by immunoelectrophoresis and starch-gel electrophoresis; the immunoglobulin levels were determined by immunodiffusion. The microimmunoelectrophoretic method, using barbital buffer with an ionic strength of 0.05 M and pH 8.6, was a modification of that described by Scheidegger.[6] Antihuman serum (horse), obtained from Hyland Laboratories, Los Angeles, was used for precipitin formation.

Immunoplates,** agar-gel containing each specific antibody, anti-γG (γ2 or 7S), anti-γA (γ1A or β2A) and anti-γM (γ1M, β2M or 19S) specific antibody; were used for determination and immunoglobulin levels. The wells of immunoplates were filled by capillary tubes with approximately 0.01 ml of serum samples. In the same manner, three wells were filled with the three standard solutions of each gamma globulin of a known concentration. The plates for γG were incubated at 37° C. for four hours and those for γA and γM were incubated at 22° C. for 16 hours. The diameter of the precipitin ring, measured with a viewer and a fine scale comparator,*** 15 x 0.1 mm, is proportional to the concentration of the gamma globulin. The concentration of the unknown was calculated from the curve obtained by plotting the precipitin ring diameters of samples of known concentrations on semilogarithmic graph paper. In all, 36 normal human sera were used as controls for immunoglobulin study.

* Department of Genetics, University of Hawaii.
† Straub Clinic.
‡ Department of Pathology, Kuakini Hospital.
§ Department of Pathology, St. Francis Hospital.
Genetics paper 7-111, Pacific Biomedical Research Center paper.

** Obtained from Hyland Laboratories, Los Angeles.
*** Obtained from Finescale, 3258 West 6th Street, Los Angeles, California 90005.

The starch-gel electrophoretic method described by Smithies,[7] with a modification of Poulik,[8] was used in this study.

ABO and I-i blood groups were determined by direct agglutination of a 2 per cent saline suspension of red cells at 22° C. for ABO and 18° C. for I-i. Anti-A, anti-B and anti-A,B were obtained from Dade Reagents, Miami, and from Hyland Laboratories. Anti-I was supplied by Dr. A. S. Wiener in New York, and the anti-i serum was obtained from Dr. and Mrs. John Crookston, Toronto General Hospital, Canada. In addition to the patients' red cells, those from approximately 100 human adults and more than 30 newborn babies were tested with anti-I and anti-i sera respectively.

Isoagglutinin titers were determined by using serial dilutions of sera after inactivation at 56° C. for 30 minutes. Two per cent saline suspensions of red cells, possessing corresponding antigens, were used for both direct saline agglutination and after ficin treatment. The sera were treated with 0.2 M 2-mercaptoethanol in phosphate-buffered saline at pH 7.4 for 4 hours at 37° C., similar to the method used by Mollison.[9] To prepare the sera for further serological tests, the mercaptan was removed by dialysis for 24 hours against the phosphate saline buffer.

RESULTS

Immunoelectrophoresis of sera in agar gel shows representative precipitin patterns after reacting with anti-human serum and the increased gamma globulin component forms a heavy and abnormally shaped precipitin line (Fig. 1). The serum of 1-a shows a γA myeloma globulin; this protein did not diffuse well towards the antiserum trough within 24 hours, whereas other serum proteins had diffused and formed precipitin lines. The serum sample of 1-b is a γG myeloma; this protein had migrated faster than the other γG type myeloma sera, 1-d and 1-e. The serum of 1-e produced a slow and relatively homogeneous γG myeloma component. The immunoelectrophoretic patterns of 1-c and 1-f were produced by normal human sera. Figure 2-c shows a γA precipitin line. Figure 2-e shows a γA line along with the γG line. Figure 2-e was from a patient with chronic glomerulonephritis, as proven by laboratory tests and postmortem examination of the kidneys. Other serum samples were obtained from normal human individuals. Figure 3 summarizes for the present cases, the immunoelectrophoretic patterns of various types of myeloma proteins with different electrophoretic mobility and abnormal precipitin lines.

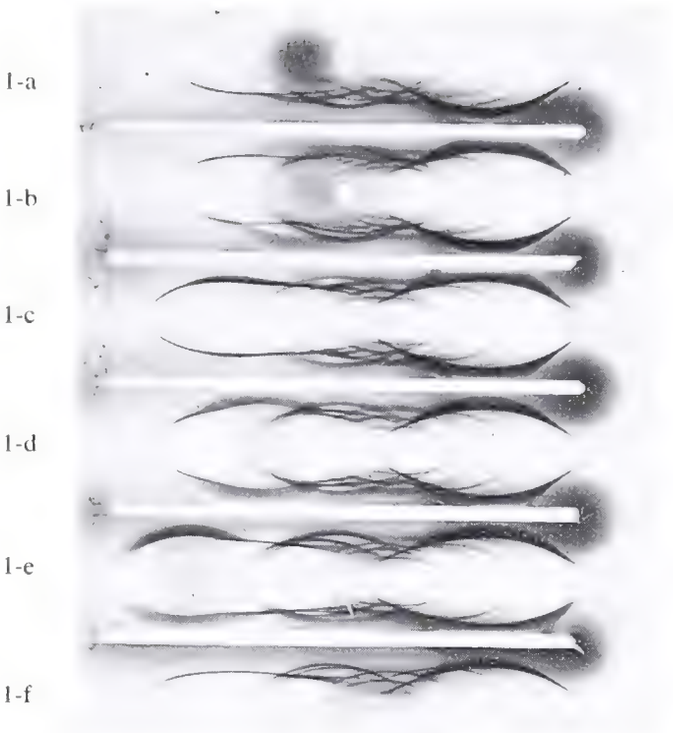


FIG. 1.—*Immunoelectrophoretic patterns of various human sera.*



FIG. 2.—*Immunoelectrophoretic patterns of various human sera.*

Starch-gel electrophoresis characterized the myeloma protein fractions as to mobility and concentration (Fig. 4). The patterns 4-a, 4-e and 4-f on starch-gel electrophoresis are equivalent to the immunoelectrophoretic patterns 1-b, 1-d and 1-e respectively. These three sera show different immunoelectrophoretic γG myeloma patterns and also different starch-gel electrophoretic charges (i.e., electrophoretic heterogeneity). The patterns of 4-a indicate a relatively homogeneous γG, 4-e

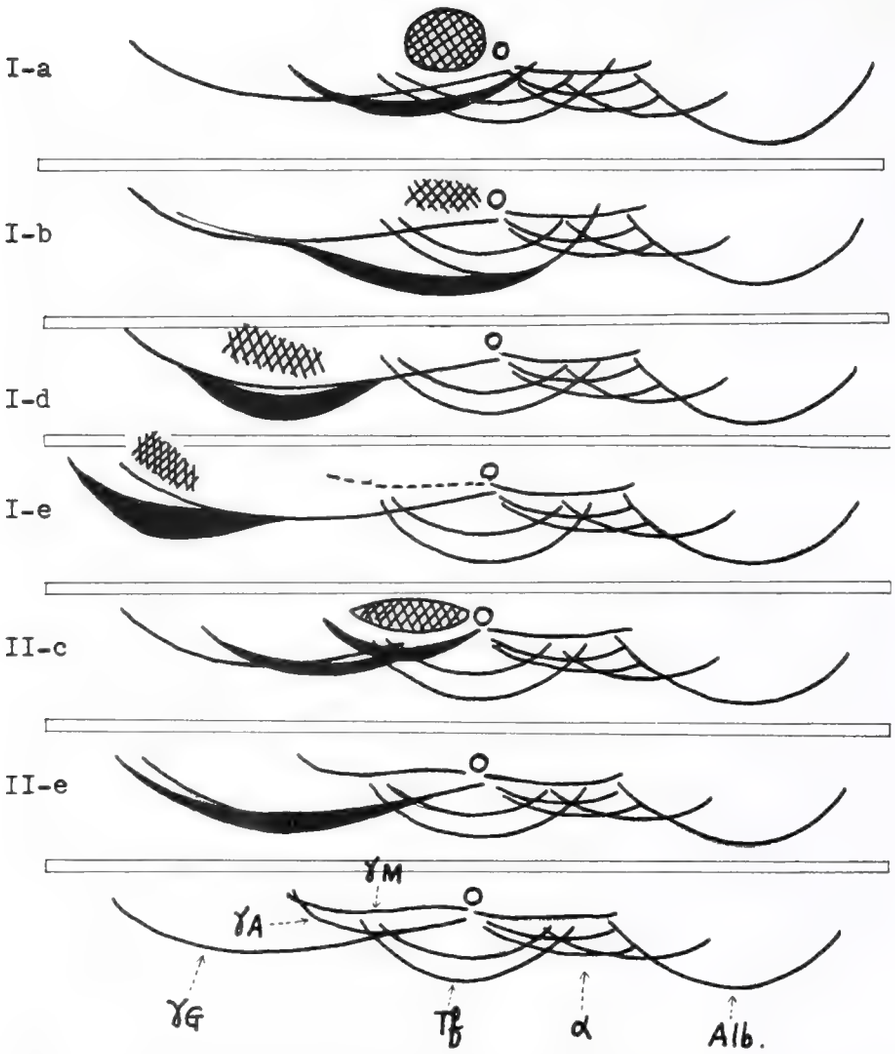


FIG. 3.—*Schematic diagram of immunoelectrophoretic patterns of multiple myeloma sera.*

shows a multiplicity of γG components, and 4-f has a heterogeneous population of γG components. The pattern of 4-b is another γG type of myeloma protein; 4-c is the same serum sample from 4-b after two months. The pattern of 4-d is a serum from a patient with clinical lupus erythematosus; no abnormality was observed. Figure 4-g, -h and -i were our reference sera, γG, γM, and γA of multiple myeloma patients; these sera were obtained from Dr. William Terry, National Cancer Institute, Bethesda, Maryland.

The immunoglobulin levels of the myeloma proteins and various blood disorders and collagen disease are shown in Table 1. Immunoglobulin levels of 36 normal human sera showed from 820 to 1550 mg/100 ml (average 1185 mg/100 ml) for γG, from 85 to 260 mg/100 ml (average 140 mg/100 ml) for γA, and from 55 to 145 mg/100 ml (average 105 mg/100 ml) for γM, respectively. Each of the myeloma sera shows a great increase of its respective immunoglobulins. Sera from hemophilia and lupus erythematosus patients

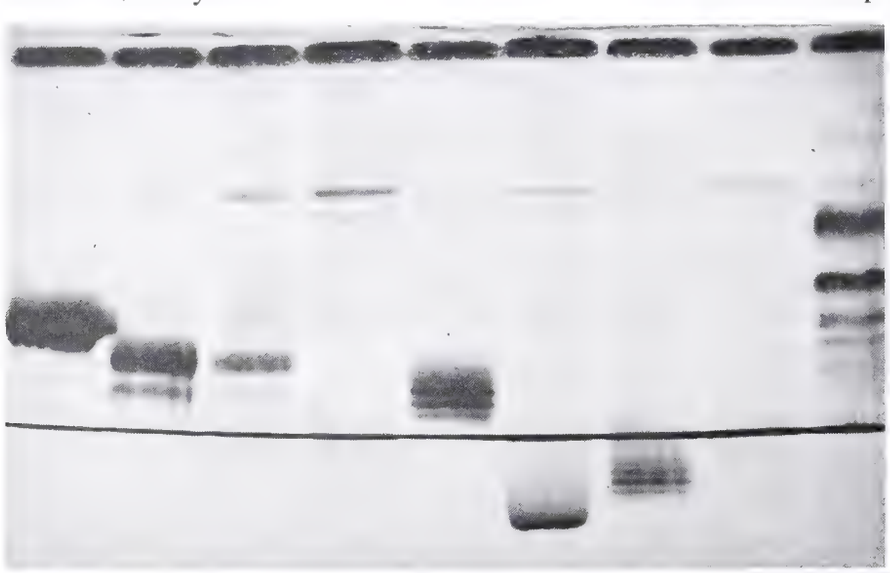


FIG. 4.—*Starch-gel electrophoretic patterns of various human sera.*

TABLE 1.—*Blood groups, isoagglutinin titers and immunoglobulin levels of multiple myeloma sera.*

				ISOAGGLUTININ TITERS				IMMUNOGLOBULIN LEVELS (mg/100 ml)		
				ANTI-A		ANTI-B				
	ABO	I	i	*Saline*	*Ficin*	*Saline*	*Ficin*	γG	γA	γM
MM-1	O	3+	O	1:16	1:16	1:32	1:32	*>7000*	40	47
MM-2	O	2+	O	1:8	1:16	1:4	1:8	420	31	*>1000*
MM-3	A	1+	W	–	–	1:16	1:32	910	*670*	108
MM-4	A	3+	O	–	–	1:2	1:2	315	*1125*	12
MM-5	O	4+	O	1:8	1:8	1:16	1:16	*3700*	31	10
MM-6	O	4+	O	1:16	1:16	1:32	1:32	*2050*	55	30
MM-7	A	2+	W	–	–	1:4	1:8	820	*760*	26
MM-8	B	1+	O	–	–	1:16	1:16	*8200*	50	42
MM-9	A	3+	O	–	–	1:8	1:8	*5200*	350	70

The italicized numbers indicate increase of immunoglobulin.

showed a variety of immunoglobulin levels, but all gamma globulin components were found to be within normal range. The γG level in the sera from chronic myelogeneous leukemia patients was at a higher level than the normal average and a little higher than that seen in chronic lymphocytic leukemia. One of the idiopathic thrombocytopenic purpura cases showed low γG and γA globulin levels; the other two cases showed higher γA levels. Rheumatoid arthritis showed an elevation of γM. Hypogammaglobulinemic sera by paper electrophoresis demonstrated a lower level of both γA and γM components, but the γG fraction was normal.

There was no significant predominance of any of the ABO blood groups in myeloma red blood cells. However, either a lack of the I-antigen or a decreased reactivity to the anti-I serum was found in most sera of hemophilia and idiopathic thrombocytopenic purpura, some of lupus erythematosus, most of chronic myelogenous leukemia and some of chronic lymphocytic leukemia, and one of hypogammaglobulinemia. There was no abnormality in reactivity of the I-antigen of multiple myeloma and rheumatoid arthritis. There was no reaction of red cells with anti-i serum, since the i-antigen is an infant-specific component.

The isoagglutinin titers of 50 group O normal subjects ranged from 1:32 to 1:256 (average, 1:64) for anti-A, and from 1:16 to 1:128 (average, 1:32) for anti-B with both saline and ficin methods. Anti-A and anti-B titers of the 30 group B and group A normal subjects ranged from 1:16 to 1:128 (average 1:32). Myeloma sera showed variable but low isoagglutinin titers, which did not correlate with the gamma globulin increase. The isoagglutinin titer dropped markedly during the terminal stages of the illness. Sera from hematological disorders and collagen diseases also showed similar results. The sulfhydryl reagent abolished the isoagglutinin activities using both saline and ficin methods.

MYELOMA PROTEIN DIFFERENT

In multiple myeloma, one of the immunoglobulin components is greatly increased and shows distinctive immuno- and starch-gel electrophoretic patterns. Since overwhelming infection is the immediate cause of death in many patients with multiple myeloma, the immune mechanisms are considered to be impaired. The present results indicate that the immunoglobulins increase as the myeloma cells proliferate. However, there is no relationship between the gamma globulin concentrations and the isoagglutinin titers. It is therefore assumed that either the myeloma protein differs from normal globulins both serologically and immunochemically, or the relatively homogeneous and nonantibody-active gamma globulins produced by the myeloma cells probably block the isoagglutinins, reacting with red cell antigen, and thus cause lower titers. Chronic lymphocytic and myelogenous leukemias also showed subnormal isoagglutinin titers without abnormal changes in the gamma globulin levels.

There is a limited range of variation of the anti-A and anti-B titers between individuals and also in each individual from time to time. The saline anti-A and anti-B agglutinin titers are approximately 1:16 and 1:128 in healthy human subjects. Antigenic stimuli such as incompatible blood transfusions, pregnancies, vaccinations, and certain bacterial infections may cause an abnormal rise of these isoagglutinin titers and an increased incidence of immune characteristics. Shohl *et al.*[5] found that the titer of isoagglutinins is significantly below the normal range in many cases of multiple myeloma, macroglobulinemia, congenital agammaglobulinemia, and chronic lymphocytic leukemia. The distinctive feature of many cases of multiple myeloma is that the anti-A or anti-B titer is extremely low or undetectable, despite the fact that

the γG globulin is usually greatly increased. The abnormal cells are presumably derived from a single clone that produces a γG globulin without isoagglutinin activity. The γG protein may be produced at the expense of the other normally occurring proteins including the anti-A and anti-B isoantibodies.

DRUGS NOT CAUSE

On the other hand, in comparison with cell function for gamma globulin production, the influence of drug therapy on the immunological function of immunologically competent cells has been considered. Most patients have been treated with many of the drugs, notably Urethane (ethyl carbamate) and Alkeran (phenylalanine nitrogen mustard), which are thought to be immunosuppressors, in addition to the cortisone therapy. However, as Rawson *et al.*[4] stated, no evidence was found of any constant trend, at least in isoagglutinin titer, which might be attributable to these drugs. Therefore, we concluded that patients with multiple myeloma have two major plasmacytic clones: one composed of normal plasmacytes producing normal, immunologically active gamma globulin; the other composed of neoplastic plasmacytes with an increase of cell proliferation, producing a dysgammaglobulin, with a high proportion immunologically inactive.

Various workers,[10-15] who characterized the "naturally-occurring" and "immune" isoagglutinins according to their immunochemical properties, found that group O sera had isoagglutinin activities in both the γG and γM globulins, and that group A and group B sera had isoagglutinins in the γM globulins. It was also noted that group O individuals produced predominantly γG class isoantibodies, while groups A and B subjects tended to produce γM isoantibodies by antigenic stimulus. It

TABLE 2.—*Blood groups, isoagglutinins and immunoglobulin levels of various hematological disorders and collagen diseases.*

		ISOAGGLUTININ TITERS						IMMUNOGLOBULIN LEVELS (mg/100 ml)		
				ANTI-A		ANTI-B				
Disease	ABO	I	i	*Saline*	*Ficin*	*Saline*	*Ficin*	γG	γA	γM
Hemoph.[1]										
1	A	0	0	–	–	1:32	1:32	–	–	–
2	A	1W	0	–	–	1:32	1:32	–	–	–
3	B	0	0	1:8	1:8	–	–	–	–	–
4	B	1W	0	1:16	1:16	–	–	820	235	52
5	O	0	0	1:32	1:128	1:16	1:32	820	180	143
6	B	W	0	1:16	1:16	–	–	590	63	52
7	A	0	0	–	–	1:4	1:4	820	157	52
L.E.[2]										
1	O	1W	0	1:16	1:16	1:8	1:8	–	–	–
2	AB	0	0	–	–	–	–	–	–	–
3	O	0	0	1:32	1:32	1:32	1:32	680	290	97
4	O	1W	0	1:32	1:64	1:32	1:32	1000	160	120
5	O	2+	0	1:64	1:128	1:32	1:64	710	139	62
6	B	3+	1+	1:16	1:32	–	–	590	63	52
7	AB	4+	1+	–	–	–	–	–	–	–
CML[3]										
1	B	0	0	1:16	1:16	–	–	2000	46	80
2	A	W	0	–	–	1:4	1:16	1171	38	100
3	O	0	0	1:4	1:8	1:8	1:8	2800	72	82
CLL[4]										
1	A	4+	1+	–	–	1:16	1:32	520	52	97
2	O	1W	1+	1:32	1:64	1:8	1:16	86	63	36
ITP[5]										
1	O	W	0	1:128	1:128	1:32	1:64	320	52	135
2	O	W	1+	1:64	1:256	1:128	1:256	1100	240	120
3	O	W	1+	1:32	1:32	1:128	1:128	1450	589	125
RA[6]										
1	B	4+	0	–	–	1:64	1:64	750	105	220
2	O	3+	0	1:16	1:16	1:16	1:16	1400	138	215
Hypo-[7]										
1	B	4+	0	1:4	1:4	–	–	710	22	12
2	A	4+	0	–	–	1:16	1:16	880	18	70
3	A	0	1+	–	–	1:64	1:64	1000	34	103

[1] Hemophilia
[2] Lupus erythematosus
[3] Chronic myelogenous leukemia
[4] Chronic lymphocetic leukemia
[5] Idiopathic thrombocytopenic purpura
[6] Rheumatoid arthritis
[7] Hypogammeglobulinemia
– indicates no isoagglutinin activity due to ABO blood group or not tested for immunoglobulin levels.

is known that the sulfhydryl reagent destroys the γM globulin agglutinin activity, but does not affect the γG globulin. In the present study, 2-mercaptoethanol abolished the icoagglutinin activities of all the myeloma sera, indicating the presence of isoagglutinins as the "naturally-occurring" antibody in only the γM globulin, even in the group O patients.

The red blood cells of adults contain the I-antigen. The i-antigen is fully developed at birth; however, the i-antigen gradually decreases its reactivity against anti-i serum and disappears within 18 months. As reported by Giblett *et al.*[16] and McGinnis *et al.*,[17] the present study confirms the existence of i-antigen activity on the red cells of adult patients with various blood disorders, while there was a decrease or loss of the reactivity with anti-I serum. However, such abnormality was not found in myeloma patients.

The results suggest that some environmental factor[18] affects the red cell antigen in either enzymatic activity or red cell metabolism. Recently, Schmidt *et al.*[19] reported that normal I-positive red cells are altered in vitro by treatment with pleuropneumonia-like organism (PPLO) so that, like leukemia red cells, these cells are I-negative.

SUMMARY

In the current study, immunoelectrophoretic and starch-gel electrophoretic analyses of sera from multiple myeloma patients were carried out. The elevation of the gamma globulin of myeloma patients did not show a correlation with the isoagglutinin titer. The red blood cells of some of the blood disorder cases showed decreased I-antigen reactivity. ■

ACKNOWLEDGMENT

The authors are grateful to Drs. Thomas F. Fujiwara, Noboru Oishi, George Suzuki, Yasuo Takenaka, R. T. S. Jim, Charles Ching, and Arthur Wong for supplying the blood samples from the patients with hematological disorders. The authors are also indebted to Colonel Slater M. Dozier, Tripler General Hospital, Honolulu, for his kind arrangement for photographic service and to Mr. Richard K. Sakai for his performance of the starch-gel electrophoresis.

REFERENCES

1. Davidsohn, I.: Isoagglutinin titers in serum disease, in leukemia, in infectious mononucleosis and after blood transfusions, Amer. J. Clin. Path. 8:179-196 (Mar.) 1938.
2. Lawson, H. A., Stuart, C. A., Paull, A. M., Phillips, A. M., and Phillips, R. W.: Observation on the antibody content of the blood in patients with multiple myeloma, New Eng. J. Med. 252:13 (July) 1955.
3. Teitelbaum, J. I., Wiener, J., and Desforges J. F.: A serologic and electrophoretic study of the malignant and proliferative disorders of the hemopoietic and reticuloendothelial system, J. Lab. Clin. Med. 53:535-552 (Apr.) 1959.
4. Rawson, A. J., Abelson, N. M., and McCarty, D. J.: The isohemagglutinin partition in rheumatoid arthritis. Arthritis-Rheum. 4:463-470 (Oct.) 1961.
5. Shohl, J., Morrison, E. G., Fahey, J. L., and Schmidt, P. J.: Relation of isohemagglutinin levels to gamma globulin changes in disease, J. Lab. Clin. Med. 59:753-759 (May) 1961.
6. Scheidegger, J. J.: Une micro-méthode de l'immunoelectrophorèses Lat. Arch. Allergy Appl. Immunol. 7:103-110 (Mar.) 1955.
7. Smithies, O.: Zone electrophoresis in starch gels; group variations in the serum proteins of normal human adults, Biochem. J. 61:629-641 (Dec.) 1955.
8. Poulik, M. D.: Starch-gel electrophoresis in a discontinuous system of buffers, Nature 180:1477-1479 (Dec.) 1957.
9. Mollison, P. L.: Blood Transfusion in Clinical Medicine. F. A. Davis Co., pp. 218 (Dec.) 1961.
10. Fudenberg, H. H., Kunkel, H. G., and Franklin, E. C.: High molecular weight antibodies, Proc. VIIth Int. Cong. Blood Transf. Rome (Sept.) 1958, pp. 522-527.
11. Rawson, A. J., and Abelson, N. M.: Studies of blood group antibodies. III. Observations on the physicochemical properties of isoagglutinins and isohemolysins, J. Immun. 85:636-639 (Dec.) 1960.
12. Rawson, A. J., and Abelson N. M.: Studies of blood group antibodies. IV. Physicochemical differences between isoanti-A,B and isoanti-A or isoanti-B, J. Immun. 85:640-647 (Dec.) 1960.
13. Yokoyama, M., and Resnik, R. A.: Immunochemical differences of human sera in the ABO blood group system, Z. Immunität. u Allergy. 126:269-279 (Feb.) 1964.
14. Yokoyama, M., Finlayson, J. S., Suchinsky, R. T., and Roberts, N. E.: Chemical and serological characteristics of blood group antibodies in the ABO and Rh systems, J. Immun. 87:56-63 (July) 1961.
15. Yokoyama, M., and Fudenberg, H. H.: Heterogeneity of A^p antigen in pig red blood cells: Significance for detection of human "immune" anti-A J. Immun. 92:413-424 (Mar.) 1964.
16. Giblett, E. R., and Crookston, M. C.: Agglutinability of red cells by anti-i in patients with thalassemia major and other hematological disorders, Nature 201:1138-1139 (Mar.) 1964.
17. McGinniss, M. H., Schmidt, P. J., and Carbone, P. P.: Close association of I blood groups and disease, Nature 202:606 (May) 1964.
18. Schmidt, P. J., Yokoyama, M., McGinniss, M. H., and Carbone, P. P.: Effect of disease on an expression of blood group I. Proc. Xth Cong. Int. Soc. Blood Transf. Stockholm (Sept.) 1964.
19. Schmidt, P. J., Barile M. F., and McGinniss, M. H.: The I blood group, PPLO and leukemia. VIIth Amer. Soc. Hemat. (Abstract) Seattle (Sept.) 1964.

Two inherited hematologic defects may occur in the same patient without influencing one another.

Glucose-6-Phosphate Dehydrogenase Deficiency Associated with Hemogobin H Disease

ROBERT T. S. JIM, M.D.,* *Honolulu*

• *Two Filipino patients exhibited combined G6PD deficiency and hemoglobin H disease. The incidence of G6PD deficiency was found to be two out of 12 patients with hemoglobin H disease, or an incidence of 16.6 per cent. Reduced level of G6PD in certain hemoglobinopathies is discussed.*

GLUCOSE-6-PHOSPHATE dehydrogenase (G6PD) deficiency may be found in some varieties of congenital nonspherocytic hemolytic anemia,[1] in thalassemia[2] and in certain hemoglobinopathies.[3] Low G6PD values have been reported in sickle cell trait and sickle cell anemia[3] and absence of G6PD enzyme has been found in hemoglobin H disease.[4, 5] In this report two additional patients, of Filipino extraction, are presented with combined G6PD deficiency and hemoglobin H disease.

CASE REPORTS

CASE 1. A 62-year-old male Filipino pineapple research laboratory helper was first seen by me in 1961 for evaluation of anemia. He had had a bout of obscure fever many years ago while in the Philippines. In 1954 essential hypertension was discovered. There was a history of moderate intake of alcohol since 1954. In 1960 abdominal pain and shortness of breath developed. A GI series was normal. Family history was negative for anemia.

In 1961 the significant physical findings were a blood pressure of 160/80, slight pallor, and questionable scleral icterus; no hepatosplenomegaly was found.

Red count was 6.08 million, hemoglobin 10.6 g/100 ml, and white count and differential smear normal. Microcytosis, hypochromia, anisocytosis, poikilocytosis, and target cells were seen in the blood smear. The platelet count was 150,000/mm^3 (Rees-Ecker method). The reticulocyte count was 3.0%. The fetal hemoglobin was 3.8% (alkali denaturation method). The BUN was 15 mg%. The cephalin flocculation was 4 plus and the SGOT was 54 units (normal 4-40). The quantitative erythrocyte osmotic fragility curve revealed a marked shift towards decreased osmotic fragility in hypotonic saline.

Hemoglobin electrophoresis (in Vernal buffer, pH 8.6 and in acid phosphate buffer, pH 6.5) revealed a large amount of normal hemoglobin (A type) plus a smaller amount of hemoglobin H. Dameshek's preparation revealed the presence of the typical hemoglobin H intraerythrocytic inclusion bodies in most of the erythrocytes. No G6PD activity was found in the erythrocytes (method of Motulsky and Campbell).

CASE 2. A two-year-old Filipino boy was first seen by me in January, 1962, because of anemia

* Professional Center Building, 1481 South King St., Honolulu, Hawaii, 96814.
(This study was supported by Grant HE 03480-05 from the United States Public Health Service.)

of one year's duration, unresponsive to oral iron therapy. The past medical history was noncontributory. The family history was negative for anemia.

The only significant physical findings were slight underdevelopment and pallor. The liver and spleen were not palpable.

Red blood cells were 4,800,000/mm^3, hemoglobin 9.0 mg/100 ml, white blood cells 15,800/mm^3 with 36% neutrophils, 3% basophils, 44% lymphocytes, 2% monocytes, and 4% atypical monocytes. On the peripheral blood smear, microcytosis, hypochromia, poikilocytosis, anisocytosis, and few target cells were seen. The platelet count was 150,000/mm^3 (Rees-Ecker method). The fetal hemoglobin was 3.7%.

Hemoglobin electrophoresis revealed a large amount of normal hemoglobin and a smaller amount of hemoglobin H. Dameshek's preparation revealed the typical hemoglobin H intra-erythrocytic inclusion bodies. No G6PD activity was detected in the erythrocytes (method of Motulsky and Campbell).

COINCIDENTAL DEFECTS

G6PD levels are usually normal, or even elevated, in hemoglobin H disease.[5, 6] Low G6PD level has been reported in an 11-year-old Chinese-Siamese-Indonesian-European boy with hemoglobin H.[7] Vella has found G6PD activity absent in three of nine Chinese patients with hemoglobin H disease.[4] Of 12 patients with hemoglobin H disease, I have found two patients of Filipino extraction exhibiting an associated lack of G6PD enzyme.

Both of the patients presented in this report with combined G6PD deficiency and hemoglobin H disease were Filipino. Filipinos have a high incidence of thalassemia, hemoglobin H disease, and G6PD deficiency.[8] It would appear that certain races surrounding the Mediterranean, near Eastern, and Asiatic areas show a high incidence of these closely related genetic defects.

The lack of G6PD in the two patients with hemoglobin H disease in this report did not appear to result in a more severe form of hemoglobin H disease. These two patients were no different clinically and hematologically from the other observed patients with hemoglobin H disease and normal G6PD levels.[8] However, the exposure of hemoglobin H disease patients lacking G6PD enzyme to certain drugs, chemicals, or other noxious agents could conceivably aggravate the existing anemia.

Finally, the genetic defects for hemoglobin H disease and for G6PD deficiency in the same individual are probably inherited separately. In a recent case report of thalassemia associated with G6PD deficiency in a pregnant woman, it was demonstrated that the thalassemia gene was inherited from one parent, while the defect for G6PD deficiency was inherited from the other parent.[2] ■

REFERENCES

1. Kirkman, H. N., and Riley, H. D., Jr.: Congenital nonspherocytic hemolytic anemia, Amer. J. Dis. Child. 102:313 (Sept.) 1961.
2. Cahill K. M., and Ley, A. B.: Favism and thalassemia minor in a pregnant woman, J.A.M.A. 180:119 (Apr.) 1962.
3. Naylor, K. M., Rosenthal, I., Grossman, A., Schulman, I., and Hsia, D. Y.: Activity of glucose-6-phosphate dehydrogenase in erythrocytes of patients with various abnormal hemoglobins, Pediatrics 26:285 (Aug.) 1960.
4. Vella, F.: Personal communication.
5. Vella, F.: Susceptibility to drug-induced hemolysis in Singapore, Med. J. Malay 13:1 (June) 1959.
6. Rigas, D. A., and Koler, R. D.: Erythrocyte enzymes and reduced gluthathione (GSH) in hemoglobin H disease: relation to cell age and denaturation of hemoglobin H, J. Lab. Clin. Med. 58:417 (Sept.) 1961.
7. Helleman, P. W. Punt, K., and Verloop, M. C.: Occurrence of hemoglobin H and hemoglobin Bart's in alpha-thalassemia: a family with two possible homozygous cases and with G-6-PD deficiency, Nature 201 (4923):1039 (Feb. 29) 1964.
8. Jim, R. T. S.: Hemoglobin H disease in Hawaii, Acta Hemat. (Basel) 27:274 (May) 1962.

Technical Reports

A TECHNIQUE FOR MARKING AND FACILITATING THE RE-EXAMINATION OF SLIDES

There has been a need for a simple, more effective method of marking histologic or cytologic slides during examination, in order that clinically significant cells or specific areas of interest might be quickly located for further examination. This is most helpful especially for cytology screeners in aiding their pathologist to find suspicious cells or areas of interest more readily.

After using wax pencils, pens, white paint in marking pens, drawing pencils, and various other methods, I have settled on a technique that has proved to be far more useful and practical, and more accurate in marking.

I have been using my technique chiefly in marking suspicious cells during screening of smears by means of the Papanicolaou technique, in order to facilitate re-examination and diagnosis by my pathologist.

My method requires: (1) a discarded oil immersion ocular which fits the microscope being used; (2) a cut-out letter "O" from any discarded rubber stamp, which is about the size of a small letter "o" of the average typewriter; (3) any type of stamp pad; and (4) stamp pad ink of any color, but preferably black.

Once you have selected your rubber stamp "O", cut out and trim the "O" so that it will fit on the tip of the oil immersion ocular, and stick the "O" on the oil immersion tip with the aid of household glue or any other adhering agent. Allow the recommended time for drying of the glue. I refer to the oil immersion ocular with the glued-on "O" as the "marking apparatus."

PROCEDURE

After finding the area you wish to mark, center the interesting area with the aid of the high power ocular. Moisten the marking apparatus lightly with stamp pad ink. Without disturbing the slide setting, slightly elevate the microscope tube and switch the marking apparatus into place. Slowly lower the marking apparatus until the rubber "O" gently touches the slide. Once touched, the slide is marked. The intensity of the mark can be controlled according to the pressure applied to the slide. (If your "O" is glued directly in the center of the marking apparatus, you will find the cells or interesting area you wished to have marked directly in the center of the marked circle on the slide.)

Because stamp pad ink is used for marking, once dried, it will withstand normal handling and filing without being disturbed. Should a need arise to remove the marking, a cotton-tipped applicator dipped in acetone or alcohol will do the job.

This method of marking does not require as steady nerves as would marking with pencil or pen. Furthermore, one need not continue to focus to see if the correct area is being marked.

So little pressure is required that I have used this marking apparatus on freshly-mounted coverslips of cytology slides with very satisfactory results.

I have used this method of marking since April, 1961, and it has met with great approval by three of the pathologists I've worked for in these years. ■

PUNCHO BICOY
Acting Director of Laboratory
Molokai General Hospital
Kaunakakai, Molokai



Festschrift

Honoring

DR. MAX LEVINE

Guest Editor: John R. Stephenson, M.D.

The cost of this special section was defrayed by a grant from the Public Health Committee of the Honolulu Chamber of Commerce.



Max Levine, Ph.D., Sc.D.: Kudos and Aloha!

This issue of the HAWAII MEDICAL JOURNAL pays tribute to a great scholar, scientist, and humanitarian, who came to Hawaii in 1947 to serve the health professions and the public health needs of Hawaii, and has served them well. The Editors of this JOURNAL and the medical profession of the State wish to express their thanks to Dr. Max Levine.

Dr. Levine came to establish the Bureau of Laboratories of the Territorial Department of Health. He was persuaded to become its first Chief, and remained in Hawaii. Prior to coming here, he had a long and distinguished career at the Iowa State University. This was soon after his training in biology and public health at Massachusetts Institute of Technology.

It is his lifetime interest in the bacterial flora of the intestinal tract that has made many physicians in Hawaii cherish the presence of his inquiring and stimulating mind. We all remember the huge toll neonatal and infantile gastroenteritis used to take in spite of the refinements in fluid and electrolyte therapy. In the early 1950's, medical centers were reporting the presence of enteropathogenic strains of Escherichia coli as etiologic agents for many epidemics of infantile diarrhea.

Our Bureau of Laboratories, thanks to Dr. Levine's directorship and his special interest, was alert and ready to assist in the detection of such an epidemic. Dr. Levine cautioned laboratories and physicians that stool culture reports of "no enteric pathogens found" were not adequate if they referred only to enteropathogens that are non-reducers of sugars.

Early in 1957, a small epidemic of very severe infant diarrhea occurred in Honolulu. This was the year in which many physicians became acutely aware of his important contribution. When the first case of diarrhea caused by Escherichia coli O111-B4 was discovered, with Dr. Levine's assistance, one infant had already succumbed to this infection. There were eight severe cases in the hospital at that time. They all recovered following identification of the etiologic agent.

Hospital surveillance and public health measure introduced in consultation with Dr. Levine helped identify another 110 cases. These were treated and recovery achieved without further mortality.

Dr. Levine's laboratory was one of the few centers in our nation equipped with the technical skill to do the then complicated study of serotyping of the enteropathogenic E. coli strains.

Dr. Levine's other contributions have been many and cannot be detailed here. The grateful people of Hawaii, recognizing his skill and untiring effort, twice persuaded the Legislature to have him continue serving us in spite of retirement age.

Our University of Hawaii granted this scholar and scientist his second doctorate, Honorary Doctor of Science, for his distinguished service.

The medical profession in this State is proud to pay tribute to a fine biologist, a gentleman, and a friend by dedicating this Festschrift issue of our JOURNAL to Dr. Max Levine.

RICHARD E. ANDO, M.D.

Curriculum Vitae

9 April 1889. Born in Poland. Came to U.S. when about a year old, and grew up in Boston, Mass.
30 November 1911. Married Adele Dion. Five children—Norman D., B. Eugene, S. Edgar, Melvin L., Thelma L.
1912. S.B., Massachusetts Institute of Technology, in Biology and Public Health.
1922. Ph.D., State University of Iowa, in Bacteriology and Preventive Medicine.
1960. Sc.D. (Hon. Caus.), University of Hawaii.
1913. Graduate Assistant, Massachusetts Institute of Technology (to Drs. Sedgwick and Phelps).
1913-14. Instructor, Department of Bacteriology, Iowa State College, Ames.
1914-19. Assistant Professor, Bacteriology, Iowa State College, Ames.
1919-24. Associate Professor, Bacteriology, Iowa State College, Ames.
1924-47. Professor. (1936-45, Professor-in-Charge of Department), Iowa State College, Ames.
1915-47. Research Professor, Iowa Engineering Experiment Station, concurrently with position in Department of Bacteriology.
1947-60. Director of Laboratories, Hawaii State Department of Health, Honolulu.
1948-date. Research Associate in Bacteriology (honorary appointment), University of Hawaii.
1961. First Hawaii State Legislature adopted a joint resolution commending his contributions to the public health of the state.
1961. Selected as one of the initial group of eight honorary Diplomates in Public Health and Medical Laboratory Microbiology by the American Board of Microbiology upon its establishment.

Military Service

World War I. First lieutenant to captain, Sanitary Corps, U. S. Army.
World War II. Major to colonel, Sanitary Corps, Army of the U.S., 5 December 1941 to 12 November 1946. Stationed at Brooke General Hospital, Fort Sam Houston, Texas.

Research and Investigational Activities

These have been concerned primarily with the bacteriological aspects of public health, especially in the fields of water and sewage (including industrial wastes) purification, bacteriologic laboratory diagnosis, disinfection, food processing, food poisoning, antibiotics, enteric bacteriology and other phases of environment health.

Publications

More than 200 papers published in various scientific and technical journals, including the following monograph and books:

Lactose Fermenting Bacteria and Their Significance in Water Analysis. Bull. 62, Iowa Eng. Exper. Sta. 1921.

A Compilation of Culture Media for Cultivation of Microorganisms. Williams & Wilkins, Baltimore. (Vol. II of Monographs on Systematic Bacteriology of the Society of American Bacteriologists.)

An Introduction to Bacteriology Laboratory Technique. Macmillan, New York. First ed., 1927; 2d ed. (22 reprintings), 1933; 3rd ed., 1954.

Membership on Federal Government and National Professional Society Committees

Committee of Bergey's Manual for Determinative Bacteriology, 1932-33. (Soc. Am. Bact.)
Environmental Health Study Section, Division of Research Grants, National Institutes of Health. 1947-50.
Committee on Standard Methods for the Examination of Water and Sewage, 9th, 10th and 11th editions. (Am. Pub. Health Assoc. and Am. Water Works Assoc.)
Committee on Biological Changes and Chemical Problems of Water Distribution Systems, 1956. (Am. Water Works Assoc.)
Committee on Standardization of Reagents, 1958-59. (Am. Pub. Health Assoc.)

Consultant Positions with Government and Industry

U.S. Dept. of Agriculture. Food Processing; Utilization of Fibrous Farm Wastes.
Penick & Ford, Inc. Process control.
Am. Bottlers Carbonated Beverages. Sanitary control and production of non-alcoholic beverages.
Armour Packing Co. Waste disposal.
Wallace & Tiernan Co. Chlorination problems.
Corn Products Refining Co. Utilization of glucose in beverages and waste disposal.
Several Sanitary Engineers in Iowa, Illinois and Kansas. Industrial waste treatment.
Tripler Army General Hospital. Consultant on Research Advisory Committee, 1953-date.
Leahi Hospital, Honolulu. Consultant on Research Advisory Committee, 1955 to date.

Professional Societies

Honorary Member:
- Society of Biological Chemists of India

Fellow:
- American Association for the Advancement of Science
- American Public Health Association
- American Academy of Microbiology (Charter Fellow)

Charter Member:
- Institute of Food Technology
- Federation of Sewage and Industrial Wastes Association
- American Board of Microbiology (Charter Diplomate)

Member:
- Society of American Bacteriologists (now American Society for Microbiology)
- Society for Experimental Biology and Medicine
- American Society of Professional Biologists
- American Water Works Association
- American Association of Military Surgeons
- State and Provincial Public Health Laboratory Directors
- New York Academy of Sciences
- Hawaiian Academy of Science
- Iowa Academy of Sciences
- Western Branch, American Public Health Association
- Hawaii Public Health Association (President, 1959)
- Sigma Xi
- Phi Kappa Phi
- Phi Lambda Upsilon (chemistry)
- Phi Mu Alpha (music)

Trustee:
- Blood Bank of Hawaii

Dr. Levine, with his coauthors, herewith adds to his long list (more than 200) of journal contributions in the realm of microbiology and allied subjects.

Observations on Cases of Enteropathogenic Bacteria Enteric Pathogens among Hospitalized Children

MAX LEVINE, Ph.D., Sc.D.,* JAMES R. ENRIGHT, M.D.,†
and GEORGE CHING, B.S.,§ *Honolulu*

• *Certain varieties of the colon bacillus, Escherichia coli, have at long last been accepted as the causative organisms in outbreaks of enteritis, especially among infants and young children. Often, older children turn out to be the infectors of the younger, especially in hospitals and similar institutional settings. Salmonellae and shigellae are also frequently implicated in such outbreaks. Hospital personnel may be unsuspected carriers of these organisms. All of this makes fecal examination on a more routine basis a matter of some importance.*

THE ROLE of salmonellae and shigellae as causes of enteric disease of man has long been recognized and accepted, but the status of Escherichia coli as an etiological agent in diarrheal disease of infants has been the subject of controversy ever since the species was first recognized. Thus, Emmerich,[7] in 1884 in Naples, isolated from the stools of cases of "cholera infantum" an organism which he considered to be the cause of the children's affliction.

* Retired Director of Laboratories, Hawaii State Department of Health, Research Associate in Microbiology, University of Hawaii.
† Retired Epidemiologist, Hawaii State Department of Health.
§ From the Laboratory and Epidemiology Bureaus of the Hawaii State Department of Health.
This paper is based on a presentation by the senior author at the Children's Hospital, Honolulu, Hawaii, August, 1962.

However, in 1885 in Germany, Escherich[8] observed organisms (Bacterium coli commune), which he considered to be the same as those of Emmerich, to be constantly present in stools of normal infants. Since then, such bacteria have generally been regarded as normal nonpathogenic inhabitants of the intestinal tracts of man and animals.

The organisms first isolated by Escherich and Emmerich are presently designated as Escherichia coli and E. coli var. neapolitana, respectively, the latter being differentiated from E. coli by fermentation of sucrose with acid and gas production.

For about fifty years it was recognized that what is now known as the genus Escherichia comprised many varieties. These could be differentiated on the basis of motility, liquefaction of gelatin, and fermentation of various carbon compounds, with production of specific end products. The view that some of these varieties might be associated with diarrhea persisted, but could not be adequately demonstrated.

Adam, in Germany, as far back as 1927, described a member of the coliform group which he considered to be the etiological agent in diarrhea of infants. He designated this organism "Dyspepsie-Koli," but differentiation on the basis of biochemical characteristics was not at all convincing. His views, for all practical purposes, were ignored.

It was not until 1943 (when Kaufman[16] of Den-

mark first reported thermolabile antigens associated with the envelopes, sheaths, or capsules of the coliform group, and later developed a system of bacterial typing on the basis of antigenic structure) that the association of specific varieties of coliform bacteria with diarrheal disease was established. This technique opened a new and productive path for differentiation and identification of all the enteric bacteria—coliforms, salmonellae, shigellae, and intermediate varieties—which is of fundamental epidemiologic importance.

ANTIGENS IDENTIFIED

Briefly stated, three classes of antigens—"O" (somatic), "H" (flagellar), and "K" (the latter being associated with the envelopes, sheaths, or capsules around the body of the bacterial cell)—have been demonstrated for the coliform group. The "O" antigens are alcohol and heat stable, whereas the "H" antigens are labile to these reagents. The "K" antigens, which comprise three antigen subtypes—designated as "L," "A" and "B"—have the property of inhibiting the agglutination of live bacteria by "O" antisera, but this phenomenon may be eliminated by heating the test bacteria at 100° C. for an hour.

Considering the multiplicity of antigenic components—there are presently recognized 135 "O", 40 "H", and 77 "K" (30 "L", 26 "A", and 21 "B") antigens—it is evident that complete serological typing may well become a Herculean task. In general, however, determination of the "O" and "B" antigenic components has been found adequate for routine work. For especially detailed epidemiological studies, however, it might be necessary to determine the "H" antigens.

Ewing, Tatum, and Davis[9] (Communicable Disease Center, U.S.P.H.S., Atlanta, Georgia) recognize the following 11 serotypes of Enteropathogenic E. coli (E.E.C.) to be associated with diarrheal disease in the U.S.: O26:B6, O55:B5, O86:B7, O111:B4, O112:B11, O119:B14, O124:B17, O125:B15, O126:B16, O127:B8, and O128:B12. Others will no doubt be found as more outbreaks are studied. Seven of these types have been encountered to date in Hawaii.

Bray[3] reported an interesting finding in a study of an outbreak of gastroenteritis among babies in England in 1943. The diarrheal stools were characterized by a peculiar semen-like odor; he isolated coliform organisms from practically all such stools (but rarely from stools of nondiarrheal babies) which produced a similar peculiar odor on artificial culture media. He found these organisms to be serologically the same when examined by the ordinary agglutination techniques. He designated the strain as Bacterium coli var. neapolitanum.

Giles, Sangster, and Smith[11] reported on a study of several hundred cases of infective diarrhea among infants in Aberdeen, Scotland, in 1947, in which there was 50 per cent mortality. They isolated organisms which were serologically alike, on the basis of the ordinary agglutination technique, and named the organism Bact. coli alpha. In another outbreak, which occurred in 1948, they again encountered organisms from the various cases which were serologically alike but which differed serologically from their Bact. coli alpha and were designated Bact. coli beta.

Taylor, Powell, and Wright[31] isolated coliform organisms, which appeared to be identical serologically, from a large proportion of infants affected with diarrhea in several nursing homes in London, whereas such organisms were not detected in stools from normal babies. They designated the organism Bact. coli D433.

In 1946, Varela[26] isolated a strain of E. coli from the feces and purulent secretion from the external ear of a two-month-old infant, who died of acute enteritis, and from five children and a woman employee, in an outbreak of diarrhea at the Hospital Infantil of Mexico City; he named it E. coli-gomez. Interestingly, although this organism had the cultural characteristics of the genus Escherichia (the coliform group), it was agglutinated in high dilution by antisera prepared with Salmonella adelaide,—namely, XXXV of the Kaufmann-White classification of Salmonella. It is interesting that Varela was using the antigenic analysis technique at this time; reports on such work did not appear in the U.S. literature before about 1950.

Olarte and Varela reported the very significant finding that the Bacterium coli neapolitanum of Bray, Bact. coli alpha of Giles and Sangster, Bact. coli D433 of Taylor, Powell, and Wright, and their own Bact. coli-gomez were all antigenically identical with Escherichia coli O111:B4 of the Kaufmann classification, which is apparently closely related to, if not identical with, E. coli var. neapolitana. The Bacterium coli beta of Giles and Sangster is now recognized to be identical with E. coli O55:B5. Thus, the system of antigenic typing of E. coli strains has brought order out of chaos and may have served, after a lapse of almost seventy years, to vindicate the views of Emmerich, who ascribed the cause of "cholera infantum," in Naples, to the coliform organism which he had isolated.

That E.E.C. may be much more frequently associated with diarrhea of infants and young children than are salmonellae or shigellae, is well

illustrated by the experience of the Cincinnati and Detroit Children's Hospitals. During the two-year period, March, 1954, to March, 1956, E.E.C. were isolated from 188 patients, whereas salmonellae were found in 85 and shigellae in 88 children at the Cincinnati Hospital (Cooper, Keller, and Walters[6]).

The Detroit experience was even more striking. In the nine-month period, October, 1954, to June, 1955, Stulberg and Zuelzer[30] reported that, of 460 infants admitted with diarrheas, shigellae were detected in only four and salmonellae in but ten patients, whereas E.E.C. of eight serological types, having been isolated from 106 children, were ten times as prevalent as salmonellae and 25 times as prevalent as shigellae. Gamble and Rawson[12] express the view that between 1 and 2 per cent of the population may, at any time, be excreting E.E.C. Solomon, Weinstein, and Joress,[28] in a study of 1,078 children, detected E.E.C. in 85, of which 51 were asymptomatic carriers, some harboring several serotypes.

All too common are laboratory reports reading, "Negative for bacterial enteric pathogens." The associated inference is that the diarrhea may be due to virus, when salmonellae and shigellae are not found in fecal specimens. That E.E.C. may actually be the etiological agent when viruses are suspected is strikingly illustrated in two hospital outbreaks reported by Neter, Korns, and Trussell.[24] Stool specimens collected during the course of the outbreaks in 1947 had been preserved by storage—at –40° C. to –70° C.—presumably for virus studies. E. coli O111:B4 was isolated from each of two specimens still available from one of the hospitals and from three specimens in the other when examined in 1952.

The association of E.E.C. as the etiological agent in infant diarrheas has been based solely on epidemiological evidence, but recently Koch's laws were satisfied for three types—E. coli O111:B4, O55:B5, and O127:B8. The following examples with O111:B4 are illustrative of typical findings. Neter and Shumway[23] fed 100 million E. coli O111:B4 to a two-month-old infant with multiple congenital defects. Diarrhea developed within 24 hours, a weight loss of seven ounces was observed, large numbers of this coliform type were present in the stools, and the organism was also recovered from the throat and nasopharynx. Within 48 hours after administration of Terramycin, the symptoms subsided and the organism disappeared. Ferguson and June[10] fed a mixture of three strains of E. coli O111:B4, isolated from diarrheal infants, to volunteers at the State Prison of Southern Michigan. Those fed large numbers (9,000 million of the organisms in milk) developed diarrhea within about ten hours after feeding, the organisms were present in large numbers in their stools, and a large proportion of the volunteers developed specific agglutinins for the test organism. Feeding similar numbers of a culture isolated from a normal nondiarrheal infant produced no untoward effects. Administration of Chloromycetin effected a prompt disappearance of symptoms and also of the test strain of E. coli O111:B4.

I. *Diarrhea Associated with Enteropathogenic E. coli in Hawaii (Oahu, 1957-58).*

On February 26, 1957, E. coli O111:B4 was detected for the first time in Hawaii, in a four-month-old hospitalized infant suffering from a very severe diarrhea. A survey was instituted to ascertain the incidence of infection among children in the hospital. In April, it was requested that rectal swabs be submitted to the Department of Health from all children being admitted for nondiarrheal diseases, with a view to determining the incidence of carriers of enteropathogenic E. coli serotypes. Hospital A, at which the above case occurred, submitted 7,366 specimens from all such admissions during the period, March, 1957, to December, 1958; from another hospital B, 1,084 rectal swabs from nondiarrheal children were received during the ten-month period, April, 1957, to January, 1958; and a third hospital C participated for a short period, April to July, 1957, submitting only 41 specimens from admissions of nondiarrheal children.

A. Enteropathogenic E. coli Serotypes from Cases and Carriers.

During the course of the investigation, enteropathogenic E. coli were isolated from 118 children with diarrhea, 63 children admitted for surgery or various nondiarrheal ailments, and from one hospital employee (a student nurse). Of the 63 children considered as carriers, one was from hospital C, eight from hospital B, and 54 from hospital A.

This distribution of cases and carriers among the seven enteropathogenic E. coli types which were detected is indicated in Table 1. It is apparent that the highly pathogenic E. coli O111:B4 was by far the most frequently encountered type, accounting for 92 (78 per cent) of the cases with diarrhea and 25 (39.7 per cent) of the carriers. It might also be of interest to note that the three types—O55:B5, O111:B4, and O127:B8—which have been demonstrated experimentally to cause diarrhea and development of specific antibodies in sera of volunteers fed large numbers of these organisms, were isolated from 106 (89.8 per cent) of children with diarrhea and 37 (58.8 per cent) of the carriers.

TABLE 1.—*Incidence of Cases and Carriers of Enteropathogenic E. coli Among Hospitalized Children (Oahu, 1957-58).*

E. COLI Type	CASES No.	CASES %	CARRIERS No.	CARRIERS %	TOTAL No.	TOTAL %
O26:B6	4	3.4	7	11.1	11	6.1
O55:B5	11	9.4	7	11.1	18	10.0
O86:B7			1	1.6	1	0.5
O111:B4	92	78.0	25	39.7	117	64.7
O125:B15	1	0.8			1	0.5
O126:B16	7	5.9	18*	28.6	25	13.8
O127:B8	3	2.5	5	7.9	8	4.4
Total	118	100.0	63	100.0	181	100.0

* One student nurse, also, harbored E. coli 0126:B16.

The potential hazard of unrecognized carriers admitted to children's hospital wards or nursing homes is strikingly illustrated by the following experience in Pittsburgh in 1953 as reported by Stock.[29] A child which had been in the Pittsburgh Children's Hospital with erythroblastosis fetalis was returned to Maternity Home A, where 12 children (the entire population) developed diarrhea. Stool specimens from nine of these were examined and yielded E. coli O111:B4. One of the three children, whose stool had not been cultured, was transferred to Maternity Home D where 20 of 45 infants came down with diarrhea. Three of the latter were so sick that they were sent to Hospital E where eight infants came down with diarrhea; E. coli O111:B4 was isolated from two of them. An infant returned home from Hospital E developed diarrhea and was sent to Hospital F where six cases developed, all yielding E. coli O111:B4.

B. Age Distribution of Cases and Carriers of Children from whom Enteropathogenic E. coli were Isolated.

In Table 2 is shown the age distribution of cases and carriers of enteropathogenic E. coli. Of the 118 cases, 111 (94.1 per cent) were children under two years old, whereas of the 63 carriers, 40 (63.6 per cent) were two years or older. It will be noted that 95 (80.5 per cent) of the cases were children under one year, whereas, in sharp contrast, only 11 (16.5 per cent) of the carriers were in that age group. The importance of early detection of carriers among children admitted, especially to infant wards, as a safeguard against infection of the newborn and very young infants, is manifest, and cannot be overemphasized.

C. Antibiotic Spectra of Various Enteropathogenic E. coli Types.

Reports in the literature on susceptibility of E.E.C. to various antibiotics are, as might be expected, not in complete agreement. This may be due to (1) the proportion of various serotypes in a collection of strains under investigation, (2) variations of individual strains in a given serotype, and (3) the history of strains with respect to previous exposure to sublethal concentrations of various antibiotics. There seems to be complete agreement, however, that neomycin was especially effective, both in vitro and in vivo, against these pathogens.

TABLE 2.—*Cases and Carriers of E.E.C. Among Hospitalized Children—Age Distribution (Oahu, 1957-58).*

AGE	CASES No.	CASES %	CARRIERS No.	CARRIERS %	TOTAL No.	TOTAL %
<1 month	5	4.2			5	2.8
1-3 months	20	17.0	1	1.6	21	11.6
3-6 months	30	25.4	3	4.7	33	18.2
6-12 months	40	33.9	7	11.1	47	26.0
1-2 years	16	13.6	12	19.1	28	15.4
2 yrs. & over	7	5.9	40	63.5	47	26.0
All Ages	118	100.0	63	100.0	181	100.0
<1 year	95	80.5	11	17.4		
1 yr. & over	23	19.5	52	82.6		

Neter and Shumway,[23] employing nine strains of E. coli D433 (O111:B4), found each of them to be highly susceptible to 10 mcg/ml of Aureomycin, Chloromycetin, Terramycin, and polymyxin B and to 400 U/ml of bacitracin. Only three of the strains were inhibited by 100 mcg/ml of streptomycin and none were susceptible to 100 U/ml of bacitracin or to 500 U/ml of penicillin. Gorzynski and Neter,[13] in a study of 29 strains comprising three serotypes (O111:B4, O55:B5, and O26:B6), observed that all were sensitive to neomycin in the range of 1.5 to 50 mcg/ml, but that seven strains grew in 100,000 mcg/ml of streptomycin. They observed further that neomycin was both bacteriostatic and bactericidal; however, resistant strains developed when grown in increasing concentrations of both agents, especially streptomycin. The speed of development of resistance to streptomycin by coliform bacteria is indicated in a report by Levine and Thomas,[19] who observed that a strain of E. coli isolated from a case of cystitis, grown originally in 10 U/ml but not in 50 U/ml of streptomycin, grew luxuriantly in 20,000 U/ml after passage through only five 24-hour test tube generations when exposed to increasing concentrations of this antibiotic.

Jones[15] reported that of 30 E.E.C. strains examined, 87 per cent were susceptible to chloramphenicol, 74 per cent to streptomycin, and 70 per cent to tetracyclines; all of 11 strains examined were sensitive to Furadantin and each of only three strains employed were susceptible to neomycin.

Wheeler[32] observed that chloramphenicol (35 mg/kg/day) was an effective therapeutic agent, as the toxicity was ameliorated and the mortality of his patients was reduced to zero; but the causative E.E.C. strains frequently were not eliminated from the stools and developed resistance to this antibiotic. With neomycin (50 mg/kg/day), cross infections were eliminated and the stools of the treated patients were negative in two days. Cooper, Walter, and Keller,[6] in a study of 42 strains of E.E.C. serotype O127:B8, freshly isolated from cases, observed that polymyxin B, neomycin sulfate, chloramphenicol, Achromycin, and Terramycin were bactericidal for all of the strains, which, however, were resistant to dihydrostreptomycin. They observed further that neomycin (40 mg/kg/day), administered orally, was effective therapeutically though not bacteriologically, as 12 of 20 patients were found to be excreting the organism after cessation of medication. Increasing the dose of this antibiotic to 150 mg/kg/day for two days and 100 mg/kg/day for eight days was effective both therapeutically and bacteriologically.

D. Observations on Susceptibility to Antibiotics of E.E.C. Strains Isolated in Hawaii.

Sensitivity of 129 E.E.C. strains obtained from cases and carriers of nine antibotics was ascertained by the antibiotic disk procedure. Levine and Thomas[21] demonstrated that the zone of growth inhibition produced by applications of 4-ml loopsful of varying concentrations of penicillin to agar plates seeded with a highly sensitive strain of Staphylococcus aureus was proportional to the concentrations of penicillin employed. By applying loops of a given concentration of penicillin (e.g., 10 or 5 U/ml) to plates seeded with organisms of varying susceptibilities, the diameter of the zone of growth inhibition was found to be an inverse function of the resistance of the cultures as determined by the then standard tube-dilution techniques; i.e., the more resistant the culture by the tube-dilution technique, employing liquid media, the smaller the zone of growth inhibition by the loop technique employing solid media.

This "loop-inhibition-zone technique" was found to be simple and required considerably less medium and equipment than the tube-dilution procedure. The antibiotic-disk procedure which, in principle, is similar to the loop-inhibition-zone technique, has come into general use for routine determination of sensitivity to antibiotics, though its reliability has sometimes been questioned. Braude and Dockrill[2] consider the disk method unsatisfactory with Aureomycin for coliform bacteria and staphylococci, though suitable for other antibiotics—chloramphenicol, Terramycin, and penicillin. Patrick, Craig, and Bachman[27] reported favorably on the use of the disk technique with Aureomycin for staphylococci, coliform, and several other gram negative and positive bacteria. They noted that it correlated well with the tube-dilution procedure. Neter and Shumway,[23] employing Aureomycin and six other antibiotics for determination of susceptibility of enteropathogenic E. coli strains, state that essentially identical results were obtained in tests employing disks and with the tube-dilution technique.

The organisms employed in the present study comprised 129 cultures of the following E.E.C. serotypes—O111:B4 (95 strains), O55:B5 (9 strains), O126:B16 (11 strains), O26:B6 (7 strains), O127:B8 (6 strains), and O86:B7 (1 strain). The antibiotics employed included Aureomycin, Chloromycetin, penicillin, dihydrostreptomycin, Terramycin, tetracycline, neomycin, Furadantin, and polymyxin B. Disks of two concentrations were employed with each antibiotic —Furadantin (50 and 300 mcg), dihydrostreptomycin (2 and 100 mcg), penicillin (2 and 10 units), and 5 and 30 mcg for each of the six other antibiotics. Development of wide zones (10-25 mm) of growth inhibition around both the low and high concentration disks was considered to indicate that the organism was "very sensitive"; narrow growth-inhibition zones (1-3 mm) around the low and relatively wide zones surrounding the high concentration disk (5-10 mm) indicated "moderately sensitive"; absence of any evidence of growth inhibition around the low and a small zone (usually less than 3 mm) surrounding the high concentration disk was recorded as "slightly sensitive"; and the absence of growth-inhibition zones around both disks (or presence of many small colonies within a zone of inhibition) was considered to indicate that the organism was "resistant."

An analysis of the results obtained indicated that only a few of the strains were allocated to the category "slightly sensitive" and, except for dihydrostreptomycin and Terramycin, for which about thirty-five strains were recorded as "moderately sensitive," the cultures, with rare exceptions, were either "very sensitive" or "resistant" to the various antibiotics. For practical purposes it was felt that those strains in the categories "very sensitive" and "moderately sensitive" would best be considered as "susceptible" and the others as "resistant." In Table 3 are indicated the results obtained with each of the antibiotics for the various E.E.C. serotypes. All of the 129 strains were susceptible to polymyxin and Furadantin and all but one to polymyxin B, whereas, in sharp contrast, all of the cultures were resistant to penicillin. The results ob-

tained with the other five antibiotics seemed to vary with the E.E.C. serotype, as indicated below:

Aureomycin—Each (100 per cent) of the six E. coli O127:B8 strains were susceptible, whereas only two (22.9 per cent) of nine strains of E. coli O55:B5 and two (18.2 per cent) of 11 strains of O126:B16, five (71.5 per cent) of seven strains of E. coli O26:B6 and 63 (66.3 per cent) of 95 strains of E. coli O111:B4 were susceptible to Aureomycin.

Chloromycetin—Only 25 (26.4 per cent) of the 95 strains of E. coli O111:B4, but all (100 per cent) of the 34 strains comprising the other five E. coli serotypes examined, were susceptible to Chloromycetin.

Dihydrostreptomycin—Only three (50 per cent) of E. coli O127:B8, 58 (61.1 per cent) of E. coli O111:B4 and five (71.5 per cent) of E. coli O26:B6 were susceptible to dihydrostreptomycin whereas all of the nine strains of O55:B5 and 10 (90.9 per cent) of the 11 strains of E. coli O126:B16 were susceptible to this antibiotic.

Terramycin—About half (five of nine strains) of E. coli O55:B5 and approximately two-thirds (seven of 11 strains) of E. coli O126:B16 were susceptible to Terramycin, whereas all of the seven strains of E. coli O26:B6 and each of the six strains of O127:B8, as well as 86 (90.6 per cent) of the 95 E. coli O111:B4 strains, were susceptible to this agent.

Tetracycline—Variations in susceptibility to tetracycline were less marked than was observed with the above four antibiotics. All of the E. coli O26:B6 and O127:B16 strains, 86 (90.5 per cent) of E. coli O111:B4, eight (72.7 per cent) of O126:B16, and seven (77.7 per cent) of O55:B5 strains were susceptible.

It is unfortunate that a larger number of strains in the serotypes other than O111:B4 were not available for examination, for it would be very significant if the differences observed with the relatively few representatives of these serotypes were found to hold true for more comparable numbers of cultures of the various E. coli serotypes. The results do indicate, however, that an investigator's evaluation of the relative susceptibility of E.E.C. cultures to different antibiotics might be markedly affected by the relative proportions of strains from the different serotypes in the collection of cultures under his observation.

It is apparent from the data presented in Table 3 that of the antibiotics under consideration, neomycin, Furadantin, and polymyxin B were especially and by far the most universally effective. The choice for clinical use might well depend on their relative toxicity and, particularly, retention in the intestinal tract after oral administration. In this connection, it is especially worthy of note that Herwig, Middlecamp, and Thornton[14] found that nephrotoxicity, which has frequently been associated with parenteral administration, has not been observed after oral administration of neomycin. Metzger and Jenkins[22] point out that, with neomycin, because of its bactericidal properties and its minimal absorption from the intestinal tract, a potent effect on these enteric pathogens could be expected; this would therefore be the antibiotic of choice for clinical use. On the basis of reports in the literature and information we have on experiences in Hawaii, neomycin has been successfully employed for the control of diarrheas associated with enteropathogenic E. coli. The fact that only one death occurred among the 118 cases in Hawaii (whereas mortalities of over 40 per cent had been reported in outbreaks before the significance of E.E.C. as etiological agents and their susceptibility to neomycin was appreciated) is indicative of the need and value of facilities for rapid detection of these pathogens. Considering that coliform strains have frequently been observed to develop resistance to various antibiotics, determination of specific susceptibility of strains associated with an

TABLE 3.—*Susceptibility of Enteropathogenic E. coli Serotypes to Various Antibiotics.*

E. coli Type	O111:B4	O55:B5	O126:B16	O26:B6	O127:B8	All Strains
No. of Strains	95	9	11	7	6	129*
ANTIBIOTIC	PER CENT OF STRAINS SUSCEPTIBLE					
Neomycin	100.0	100.0	100.0	100.0	100.0	100.0
Furadantin	100.0	100.0	100.0	100.0	100.0	100.0
Polymyxin B	98.8	100.0	100.0	100.0	100.0	99.2
Tetracycline	90.6	77.7	72.7	100.0	100.0	89.2
Dihydrostreptomycin	61.1	100.0	90.9	71.5	50.0	66.7
Terramycin	90.6	55.5	63.6	100.0	100.0	66.0
Aureomycin	66.3	22.2	18.2	71.5	100.0	62.1
Chloromycetin	26.4	100.0	100.0	100.0	100.0	45.8
Penicillin	0.0	0.0	0.0	0.0	0.0	0.0

* Includes 1 strain of 086:B7 which was isolated from a carrier. It was resistant to penicillin and susceptible to all of the other antibiotics.

outbreak of diarrheal disease among infants, is imperative.

II. *Incidence of Enteropathogenic E. coli, Salmonella, and Shigella Serotypes Among Children Hospitalized for Surgical and Various Nondiarrheal Diseases.*

In addition to the 63 carriers previously mentioned from whom E.E.C. were isolated, salmonellae were detected in 55 and shigellae in five children who were hospitalized for surgery, upper respiratory infections, and various other nondiarrheal diseases during the period under investigation. For comparison, the age distributions of those harboring salmonellae or E.E.C. are given in Table 4. Shigellae were isolated from five children, of whom three were in the two-to-five-year age group, one was seven years, and one was 13 years old. In general, child carriers from whom salmonellae were isolated were somewhat more frequently encountered in older age groups than those harboring E.E.C., but the difference is not considered significant. However, of 11 children under one year who were carriers of E.E.C., three were three to six months and one was less than one month old; of the nine carriers of salmonellae, six were between three and six months and one was less than a month old. Thus, detection of the carrier state in very young children hospitalized for surgery, or various nondiarrheal diseases, may well be a significant factor in the control of institutional outbreaks of diarrheal diseases.

A. Types of Enteropathogenic E. coli Detected in Children Hospitalized for Surgery, Upper Respiratory and Other Nondiarrheal Diseases.

The incidence of various E.E.C. serotypes isolated from children hospitalized for surgery, upper respiratory infections, etc., is indicated in Table 5. Of the 63 carriers detected, 21 (33.3 per cent) had been admitted for surgery (17 were tonsillectomies) and 29 (46.0 per cent) were admitted for upper respiratory infections and pneumonia. Of the remaining 13 carriers, three were admitted for fever and convulsions, two were diagnosed as roseola, and one each for the following causes—anemia, elbow pain, metabolic disease, viral meningitis, burns, nephrism, dwarfism, and mumps.

From the standpoint of control of hospital outbreaks of E.E.C. diarrheas, note that ten children admitted for tonsillectomies and 11 for upper respiratory infections were carriers of the very virulent E. coli O111:B4. As previously mentioned, this organism has been responsible for mortalities of over 40 per cent in a number of outbreaks reported from nurseries and maternity homes in Europe and on the U.S. mainland. It was the primary cause of

TABLE 4.—*Age Distribution of Children Hospitalized for Nondiarrheal Diseases Who Were Found to be Harboring Enteropathogenic E. coli, Salmonella or Shigella* (Oahu, 1957-58).*

ENTERIC PATHOGEN / *Age*	E. COLI *No.*	E. COLI *%*	SALMONELLA *No.*	SALMONELLA *%*
<1 yr.	11	17.5	9	16.3
1-2 yr.	12	19.0	6	10.9
2-5 yr.	21	33.3	14	25.5
5-10 yr.	16	25.4	22	40.0
10 yr. & over	3	4.8	4	7.3
Total	63	100.0	55	100.0

* Of the 5 Shigella carriers 3 were in the 2-5 year, and 1 each in the 5-10 and 10 and over, age groups.

the cases here in Honolulu in 1957-58. In view of the high mortalities experienced abroad, it is especially gratifying that there was only one death among the local 118 cases and that occurred before the causative organism, E. coli O111:B4, was detected. The importance of rapid detection and identification of E.E.C. as possible etiological agents in cases of diarrhea, especially in young children, should be stressed and cannot be overemphasized.

B. Salmonella and Shigella Types Detected in Children Hospitalized for Surgery, Upper Respiratory, and Other Nondiarrheal Diseases.

The incidence of Salmonella types isolated from rectal swabs of children hospitalized for surgery and various nondiarrheal diseases is indicated in Table 6. Of the 55 carriers detected, 28 (51 per cent) were admitted for surgery (22 tonsillectomies) and 18 (31.7 per cent) were suffering from upper respiratory infections. Of the remaining nine salmonella carriers, such diagnoses, as fever and convulsions (two cases), cellulitis, anemia, swollen leg, abdominal pain, epistaxis, ear infection, and cervical lymphadenitis had been made. Salmonella panama (from 14 children) and Salmonella derby (from 13 children) were by far the most frequently encountered types, infecting 49.2 per cent of the carriers detected. These salmonella types have "O" antigens in common with Salmonella typhi and Salmonella schotmuelleri (paratyphoid B), respectively. As TAB vaccination is mandatory in Hawaii for all children at three years of age and has been recommended to be carried out at one year of age, many children may therefore be partially immune, not only to the strains constituting the TAB vaccine, but to other types in Salmonella groups B and D. They are thus more likely to develop the carrier state if exposed to such organisms. Considering the incidence of adult carriers of salmonellae, exposure of children may well be more frequent than ordinarily anticipated (Levine, Enright, and Ching[20]). Such child carriers,

TABLE 5.—*Enteropathogenic E. coli Types Isolated from Children Hospitalized for Surgical and Other Nondiarrheal Diseases (Oahu, 1957-58).*

ADMITTED FOR	TONSIL-LECTOMY	MISC. SURGERY	RESPIRATORY DISEASES*	OTHER NON-DIARRHEAL DISEASES	TOTAL	
E. coli Type	*Number of Children Carriers*				*No.*	*%*
O26:B6			2	5	7	11.1
O55:B5	1		4	2	7	11.1
O86:B7				1	1	1.6
O111:B4	10	1	11	3	25	39.7
O126:B16	4	3	9	2	18	28.6
O127:B8	2		3		5	7.9
Total No.	17	4	29	13	63	100.0
%	27.0	6.3	46.0	20.7	100.0	

* Upper respiratory and pneumonia.

like those who harbor E.E.C., may therefore constitute a potential hazard when hospitalized. Their early detection is urgent to avoid outbreaks of diarrheal disease in nurseries, maternity homes, etc. The question arises whether routine examination of all admissions, especially to infant's wards, nurseries, and maternity homes, for enteric pathogens, would be a feasible and practical control measure.

SUMMARY AND CONCLUSIONS

Enteropathogenic Escherichia coli serotype O111:B4 was isolated for the first time in Hawaii on February 26, 1957, from the stool of a four-month-old hospitalized infant. Thereafter, stool specimens from children hospitalized for nondiarrheal diseases were submitted to the State Health Department with a view to detection of carriers. During the following 22-month period, E.E.C. were isolated from 118 children with diarrhea, from 63 children hospitalized for surgery or various nondiarrheal ailments, and from one employee (a student nurse).

Of seven E.E.C. serotypes detected, the highly pathogenic E. coli O111:B4 was by far the most frequently encountered, accounting for 92 (78 per cent) of the cases and 25 (39.7 per cent) of the carriers.

Of the 118 E.E.C. cases, 95 (80.5 per cent) were children under one year old. In sharp contrast, 52 (82.5 per cent) of the 63 carriers were in the one-year-and-older age groups. Only seven

TABLE 6.—*Salmonella and Shigella* Types Isolated from Children Hospitalized for Surgical and Other Nondiarrheal Diseases.*

	ADMITTED FOR	TONSIL-LECTOMY	MISC. SURGERY	RESPIRATORY DISEASES	OTHER NON-DIARRHEAL DISEASES	ALL CAUSES	
	Salmonella	*Number of Children Harboring Salmonellae*				*No.*	*%*
Group	*Type*						
B	*bredeney*	1			1	2	3.6
	derby	7	1	3	2	13	23.7
	typhimurium	1		2	1	4	7.3
C_1	*organienburg*	1	1			2	3.6
	montevideo		1	2		3	5.4
C_2	*bovis morbificans*	4			1	5	9.1
D	*enteritis*	1		1		2	3.6
	panama	2	2	7	3	14	25.5
E_1	*anatum*	4	1	2	1	8	14.6
E_2	*newington*			1		1	1.8
G	*grumpensis*	1				1	1.8
All Types	No.	22	6	18	9	55	100.0
	%	40.1	10.9	32.7	16.3	100.0	

* *Shigella Sonnei I* was isolated from 4 children—1 "respiratory" and 3 "other nondiarrheal" diseases.
* *Shigella Flexner I* was detected in 1 child—of the group "other nondiarrheal" diseases.

(5.9 per cent) of the cases, but 40 (63.5 per cent) of the carriers, were two years of age or older.

Susceptibility of 129 E.E.C. strains—95 E. coli O111:B4 and 34 distributed among five other serotypes isolated from cases and carriers—was determined employing the disk technique with nine antibiotics. Except for one strain of E. coli O111: B4, which was resistant to polymyxin B, all of the cultures were sensitive to neomycin, Furadantin, and polymyxin B, but resistant to penicillin. The other antibiotics employed were, in the order of decreasing effectiveness, tetracycline (89.2 per cent), dihydrostreptomycin (66.7 per cent), Terramycin (66.0 per cent), Aureomycin (62.1 per cent), and Chloromycetin (45.8 per cent). The observations with Chloromycetin are especially noteworthy, for whereas 70 (73.3 per cent) of the 95 strains of E. coli O111:B4 were resistant, all (100 per cent) of the 34 strains comprising the other five serotypes were susceptible to this antibiotic. Although neomycin seems to have been universally reported to be satisfactory, both therapeutically and for control of diarrheas due to E.E.C., the fact that strains of the coliform group have repeatedly been observed to develop resistance to various antibiotics indicates that determination of susceptibility to neomycin, as well as to other antibiotics, of specific coliform strains associated with diarrheal disease is imperative.

Salmonellae were detected in 55 and shigellae in five children hospitalized for surgery or various nondiarrheal diseases. Salmonella panama and Salmonella derby were by far the most frequently encountered types, accounting together for 27 (49.2 per cent) of the 55 carriers; in all, 11 different Salmonella types were isolated. Considering that 50 (79.4 per cent) of the E.E.C. and 46 (82.7 per cent of the salmonella carriers had been hospitalized for surgery or respiratory infections and, furthermore, that 11 (17.5 per cent) of the E.E.C. and 9 (16.3 per cent) of the salmonella carriers were under one year old, fecal examination of all children admitted for surgery or nondiarrheal disease, to detect carriers of enteric pathogens, may well be a significant factor in the control of institutional outbreaks of diarrheal diseases of young children. ■

REFERENCES

1. Adam, A.: Dyspepsie-koli. Zur Frage der Bakteriellen Aetiologie der Sogenannten Alimentaren Intoxikation, Jahrb. Kinderheilk, 116:8 (Jan.) 1947.
2. Braude, A. L., and Dockrill, M.: Inaccuracies in the disk method for determining bacterial sensitivity to aureomycin discovered by comparison with the tube-dilution method, J. Lab. and Clin. Med. 40:149 (July) 1952.
3. Bray, J.: Isolation of antigenically homogeneous strains of Bact. coli neapolitanum from summer diarrhea of infants, J. Path. and Bact. 57:239 (Apr.) 1945.
4. Bray, J., and Bevan, T. E. D.: Slide agglutination of Bact. coli var. neapolitanum in summer diarrhea, J. Path. and Bact. 60: 395 (July) 1948.
5. Cooper, M. L., Walters, E. W., and Keller, H. M.: E. coli associated with infant diarrhea, Ann. N. Y. Acad. Sc. 60:78 (Aug.) 1956-57.
6. Cooper, M. L., Keller, H. M., and Walters, E. E.: Comparative frequency of detection of enteropathogenic E. coli, salmonella and shigella in rectal swab cultures from infants and young children, Ped. 19:411 (Mar.) 1957; Ann. N. Y. Acad. Sc. 66:78 (Mar.) 1956-57.
7. Emmerich: Neapeler bakterien, Deut. Med. Wchnschr. 10:299, 1884.
8. Escherich, T.: Die darmbakterien des neugeborenen und säuglings, fortschritte der med. 3:515, 1885.
9. Ewing, W. H., Tatum, H. W., and Davis, B. R.: The occurrence of E. coli serotypes associated with diarrheal disease, U. S. Pub. Health Lab. 15:118 (Sept.) 1957.
10. Ferguson, W. W., and June, R. C.: Experiments on feeding adult volunteers with E. coli 0111:B4 organisms associated with infant diarrhea, Am. J. Hyg. 55:155 (Mar.) 1952.
11. Giles, C., Sangster, G., and Smith, J.: Epidemic gastroenteritis in infants in Aberdeen during 1947, Arch. Dis. Child. 24:45 (Mar.) 1949.
12. Gamble, D. R., and Rowson, K. E.: The incidence of pathogenic E. coli in routine fecal specimens, Lancet 273:619 (Sept.) 1957.
13. Gorzynski, E. A., and Neter, E.: Study on the in vitro efficiency of neomycin and streptomycin on serogroups of E. coli associated with diarrheal disease of infants, Antibiotics and Chemotherapy 3:798 (Aug.) 1953.
14. Herweg, J. C., Middlecamp, J. N., and Thornton, H. K.: Escherichia coli diarrhea, J. Pediat. 49:629 (Nov.) 1956.
15. Jones, M.: Enteropathogenic E. coli from specimens of nonfecal origin, J. Inf. Dis. 106:304 (May-June) 1960.
16. Kaufmann, F.: Uber neue thermolabile koerper-antigene der coli-bakterien, Acta Path. Microbiol. Scandinav. 20:21, 1943.
17. Kaufmann, F.: Serology of the coli group, J. Immunol. 57:71, 1947.
18. Kaufmann, F.: Enterobacteriaceae. Second Ed. Copenhagen, Einar Munksgaard, 1951.
19. Levine, Max, and Thomas, A. R.: The inhibition zone technique for determination of bacterial resistance to penicillin, J. Lab. and Clin. Med. 20:883 (Oct.) 1945.
20. Levine, Max, Enright, J. R., and Ching, G.: Salmonellosis in TAB vaccinated population; island of Oahu, Hawaii, Pub. Health Rep. 77:293 (Apr.) 1962.
21. Levine, Max, and Thomas, A. R.: Some laboratory observations on antibiotics, Bull. U. S. Army Med. Dept. 7:922 (Nov.) 1947.
22. Metzger, W. L., and Jenkins, C. J.: In vitro response of enteropathogenic Escherichia coli to various antibiotics, Pediatrics, 18:929 (Dec.) 1956.
23. Neter, E., and Shumway, C. N.: E. coli serotype D433: occurrence in intestinal and respiratory tracts, cultural characteristics, pathogenicity, sensitivity to antibiotics, Proc. Soc. Exp. Biol. and Med. 75:504 (Nov.) 1950.
24. Neter, E., Korns, R. F., and Trussell, R. E.: Association of E. coli sero-group 0111 with two hospital outbreaks of epidemic diarrhea of the newborn infant in New York during 1947, Am. J. Dis. Child. 86:350 (Oct.) 1953.
25. Neter, E.: Enteritis due to enteropathogenic E. coli, J. Pediat. 55:223 (Aug.) 1959.
26. Olarte, J., and Varela, M. C.: A complete somatic antigen common to Salmonella adelaide, E. coli-gomez and E. coli 0111:B4, J. Lab. and Clin. Med. 27:252 (Aug.) 1952.
27. Patrick, W. C., Craig, G. H., and Bachman, M. C.: Diameter of inhibition zones correlated with tube sensitivities using six antibiotics, Antibiotics and Chemotherapy 1:133 (May) 1951.
28. Solomon, P., Weinstein, L., and Joress, S. M.: Studies of the incidence of carriers of enteropathogenic E. coli in a pediatric population, J. of Pediat. 58:716 (May) 1961.
29. Stock, O. H., and Shuman, M. E.: Gastroenteritis in infants associated with specific serotypes of E. coli. II an epidemic of E. coli 0111:B4 gastroenteritis involving multiple institutions, Pediatrics 17:196 (Feb.) 1956.
30. Stulberg, and Zuelzer, W. W.: Infantile diarrhea due to E. coli, Ann. N. Y. Acad. Sc. 66:90 (Aug. 10) 1956-57.
31. Taylor, J., Powell, B. W., and Wright, J.: Infantile diarrhea and vomiting: a clinical and bacteriological investigation, Brit. Med. J. 2:117 (July) 1949.
32. Wheeler, W. E.: Spread and control of diarrheal disease, Ann. N. Y. Acad. Sc. 66:122 (Aug.) 1956-57.

Dr. Norman Levine leads off the Festschrift to honor his distinguished father. Home is where the heart is—also kids, dogs, cats, parakeets, and all of their macro- and micro-parasites!

The Home as a Biocenose: Children, Pets, and Disease

NORMAN D. LEVINE, Ph.D.,* *Urbana*

• *The home is a den and a refuge—a safe harbor from the world and a place for relaxation. But how safe is it? Injuries and diseases may be acquired in the home, and some of them no place else. Children are especially prone to accidents in the home, and poisoning due to common drugs like aspirin and to household chemicals and pesticides is not uncommon. Certain diseases and parasites are acquired in and around the home, as well.*

DISEASE and disease epidemiology are problems in ecology, but they are seldom considered as such. Ecology is the science of the relationship of living things to their environment. Animals and plants each have their own ecologies, and so does man. Human ecology is the science of the relationship of man to his environment, both animate and inanimate.

The epidemiology of disease is one area of applied human ecology, but it is more than that. It has to do with the interactions between different ecosystems—between the ecology of man and the ecologies of other organisms which impinge on it. Epidemiology may deal not only with diseases of all kinds but also with injuries and accidents, not only with infections and pestilences but also with disasters like war and earthquakes. However, I shall limit myself here to the epidemiology of diseases caused by infectious agents or parasites. And by parasite I mean any organism—bacterium, virus, rickettsia, fungus, protozoon, helminth, or arthropod—which lives on or within another organism, deriving nutriment and other benefits from it.

* Center for Zoonoses Research, College of Veterinary Medicine, Center for Human Ecology and Agricultural Experiment Station, University of Illinois, Urbana, Illinois.

The relations between a host and its parasites vary, and disease is only one possible outcome. Parasites may be beneficial symbiotes like termite protozoa, or mutualistic like the rumen microorganisms which manufacture B vitamins for cattle and sheep, or they may be commensal and live in an animal without harming it like most enteric bacteria, or they may be actually or potentially harmful, depending upon the species, the number present, and the host's defenses.

THE PARASITE'S WORLD

The environment of a parasite is its host, and parasitology is that branch of ecology in which the environment is the host. The host is a microcosm, the parasite's biocenose.

The term biocenose requires definition. An ecosystem is an association of plants, animals, and their habitat, in which the plants and animals influence both each other and their habitat. This term is ordinarily reserved for large formations which can be well isolated from each other; an entire forest or a lake with its various plant and animal denizens is an ecosystem. A biocenose is similar to an ecosystem, but smaller and less able to exist as an isolated whole. A single tree, a pond, or a rotting log is a biocenose. So is a man with his associated microscopic and macroscopic inhabitants—what the Russians call a parasitocenose.

Infectious diseases result from interactions between two biocenoses—that of the host and that of the parasite. Disease is the result of imbalance between these two biocenoses—an excess on the side of the parasite. If the two systems are in balance, there is no disease; but if the parasite injures its host, there is disease. Disease results from mal-

adjustment between man and his environment. It is the result of a parasite population explosion.

The home is one type of biocenose. A human family lives there, but the home has many more inhabitants than these. Their types and numbers vary with locality and local customs. In some places, man shares his home with his domestic animals. In northern countries, cows may help keep the place warm in winter, and sheep and goats may do the same; then, too, it is easier to care for them in cold lands if they aren't in a far-off barn. In lands like the Philippines, pigs wander in and out, and help keep the area clean of human feces and garbage. Chickens may also roost in or under the house.

DOG WITH A SEVEN-ROOM KENNEL

Pets of many kinds live in the house, too. My dog, for instance, lives in a seven-room kennel which my wife and I share with him. The same is true of cats, canaries, parrots, and parakeets, to say nothing of various other small caged birds and mammals such as hamsters, rabbits, rats, mice, skunks, squirrels, and whatnot. And such pets as goldfish, tropical fish, frogs, turtles, and snakes should be added, too.

These are all domestic animals or pets which have been introduced into the house intentionally. There are other inquilines which share the home nest without an invitation. These include such domiciliated animals as wild rats and mice, squirrels in the attic and pigeons on the roof, starlings, sparrows, and other birds which nest on house ledges or eaves, geckos and other lizards in the house, cockroaches, houseflies, silverfish, clothes moths, spiders, bedbugs, triatomins, fleas, ticks, mosquitoes, and even (to stretch a point) termites in the walls. The species complement may vary with locality, customs, habits, house construction, individual interests, and time of year, but all go together to form a biocenose, and many are a source of disease for children and even for adults.

Some inquilines are more important as disease reservoirs or vectors than others. Goldfish can probably be ignored even if another epidemic of goldfish swallowing should develop among teenagers; they are raised under conditions which preclude their becoming infected with flukes or tapeworms. Other animals, however, may not be so innocuous, and the advantages of owning them must be balanced against the possible hazards.

Dogs and cats, our commonest pets, are the most likely to be a source of infection for people. Children are much more likely to become infected from pets than are adults. They live closer to the pets and they have less immunity than adults.

DISEASES AND PARASITES THAT MAY BE ACQUIRED FROM PETS

Rabies. There is no rabies in Hawaii, and I hope that there never will be. However, the absence of a disease sometimes makes people lax. Foot-and-mouth disease and rinderpest were absent from England in the early 19th century, thanks to laws against the importation of cattle from affected areas in eastern Europe. However, the laws were repealed because free trade interests insisted and Parliament could see no danger; as a result, rinderpest and foot-and-mouth disease were brought in. It is not inconceivable that the same thing could happen with rabies in Hawaii. Many people chafe at the long quarantine that is required for dogs and cats and would like to see it abolished. And quite a variety of wildlife may get rabies, too, including skunks, raccoons, foxes, squirrels, and bats. Pet skunks are becoming increasingly popular on the mainland. They are friendly creatures, and many are captured while very young, descented, and sold as pets. However, some of them have proved to be rabid. They can give rabies directly to people or to other pets living with them.

Larva migrans. We once thought that most species of parasitic nematodes were pretty much confined to one or a few related hosts. This was because they would develop to the adult stage only in these hosts. Now we know that nematode larvae are not nearly so selective as adults, or rather that hosts are not nearly so resistant to larval nematodes as to adults. Many nematodes can survive as larvae in the tissues of animals in which they never mature. Often they cause diseases of unknown or obscure etiology in the foreign host.

When nematode larvae or eggs enter a foreign or unsual host, one of four things may happen:

(1) They may be killed almost at once or be passed on out without change;

(2) they may enter the host's tissues and migrate in them for an indefinite period without being able to develop further (a condition is known as "parasite impasse");

(3) they may enter the host's tissues, migrate in them, and molt perhaps once or twice but never mature (a type of parasite impasse); or

(4) they may develop to maturity (this may occur in laboratory animals experimentally infected with parasites to which they are never normally exposed, such as rabbits infected with Strongyloides papillosus of sheep).

Several human diseases have recently been found due to parasite impasse. One is tropical eosinophilia, pulmonary eosinophilia, or eosinophilic lung. This condition is common in the tropics and subtropics, especially in southeast Asia. Its symptoms vary, but they always include eosinophilia, pulmonary manifestations, and often various reactions like those in allergic conditions. Tropical eosinophilia is now known to be due to the migration in man of the larvae of various nematodes or other parasites, and especially to Brugia and other filariids which are normal parasites of macaques, other monkeys, cats, etc. (Edeson, Wharton, and Buckley[22]; Edeson and Wharton[21]; Buckley[14]; Sandosham *et al.*[42]; Joe[31]; Schneider[46]; Mohr[38]; Harant[27]; Blanc and Nosny[13]; Galliard.[23])

A second such disease is human eosinophilic meningitis due to the rat lungworm Angiostrongylus cantonensis. This lungworm is common in rats in a number of tropical and subtropical localities, including China, Taiwan, Australia, New Caledonia, Tahiti, and other Pacific islands. Ash[5] found it in 12 per cent of 75 Norway and black rats in Honolulu. Its intermediate hosts are land snails and slugs; freshwater shrimp are apparently transport hosts. People may become infected by eating the intermediate or transport hosts, but much remains to be learned about this disease. On Tahiti, the human infections appear to have been due to ingestion of the heads of raw shrimp.

The worms reach the central nervous system and cause a cerebrospinal eosinophilia. The meningeal symptoms are generally benign and the great majority of cases recover spontaneously. However, there have been a few deaths. Rosen *et al.*,[41] for instance, found A. cantonensis in a small part of the brain of a patient who had died in Honolulu, and similar granulomas without worms in another patient. Horio and Alicata[29] described a case of eosinophilic meningitis in a person in Honolulu who had eaten raw garden slugs, but they did not prove that parasites were present. Many papers have been published on this condition recently; although they are outside the scope of this paper, the following may be cited: Alicata,[1, 2] Alicata and Brown,[3] Weinstein *et al.*,[52] Smit,[49] Galliard.[23]

A third human disease due to parasite impasse, but one which has been known for a long time, is creeping eruption or cutaneous larva migrans. Human hookworms may produce a type of dermatitis known as "ground itch" or "water sore" in persons who have been sensitized by previous infection. The skin itches and may become inflamed, and there may even be small pustules secondarily infected with bacteria at the site of larval penetration.

This condition is transient, but a similar condition known as creeping eruption, which is due to migration of dog hookworm larvae in the human skin, may persist for as long as three months or more.

Dogs and cats have five species of hookworms. Ancylostoma caninum is the common dog species in most of continental United States. It is largely replaced by A. braziliense along the Gulf Coast and by the northern hookworm Uncinaria stenocephala in Canada; A. ceylonicum has somewhat the same range as A. braziliense, but it has only recently been differentiated from it (Biocca[11]), so little is known about its range and pathogenicity for man. The cat hookworm was formerly thought to be A. caninum also, but Biocca[12] showed that cats have a different species, A. tubaeforme, and several workers have confirmed this distinction, including Burrows[15] in the United States.

A. braziliense is by far the most common cause of human creeping eruption; A. caninum may occasionally and U. stenocephala may rarely cause it. Nothing is known about the relationship of A. tubaeforme to this condition.

The larvae penetrate the skin but are unable to go further. They migrate tortuously beneath the skin, and their tracks are often secondarily infected with bacteria. The larvae can be found ahead of their tracks. Typical creeping eruption may be the result of previous sensitization, initial infections probably producing relatively minor effects.

FLORIDA PLUMBER'S DISEASE

Creeping eruption is especially prevalent in the southeastern United States, less so in other states, and in Australia, India, the Philippines, and Indonesia (Beaver[8]). In 1950, there were over 7000 reported cases in Florida alone (Wilson[53]). In Florida, creeping eruption is an occupational disease of plumbers who must work on the pipes under houses set on the ground on piles or in open crawl spaces without a basement. Hitch and Iralu[28] indicated that Florida and Georgia have the highest reported infection rate, with 52 cases per year per physician reporting, followed by Alabama (28), South Carolina (17), North Carolina (12), and other southern states from Texas to Virginia; the condition is quite common in Kansas also.

The larvae may occasionally go beyond the skin and reach the lungs, where they may cause Loeffler's syndrome (transient infiltration of the lungs and eosinophilia) (Wright and Gold,[55] Muhleisen[39]).

I do not know how common creeping eruption is in Hawaii; some conditions are often not recognized until they are looked for. Ash[4] found Ancylostoma caninum in 71 per cent of 96 stray dogs

and A. tubaeforme in 58 per cent of 107 stray cats on Oahu, but to the best of my knowledge the other dog hookworms have not been found in this state. Hence, I doubt that creeping eruption occurs in Hawaii as frequently as in other areas with a similar climate. [It has not been diagnosed by two dermatologists, in practice here since 1940.—Ed.]

A fourth human disease due to parasite impasse is visceral larva migrans of children. This condition may be caused by a variety of nematodes. By far the most important are the common ascarids of dogs and cats, Toxocara canis and T. mystax, respectively; the former is considerably more important than the latter.

A brief review of the life cycle of T. canis is worthwhile to understand the conditions under which visceral larva migrans may occur. First, we must differentiate between the two types of dog ascarid, Toxocara canis and Toxascaris leonina. The adults look very much alike, but their life cycles are different. Animals become infected with both by eating infective eggs, and the infective larvae (which are second-stage larvae) hatch in the intestine. The larvae of T. leonina simply enter the wall of the small intestine, remain there for a while, and then return to the lumen as third-stage larvae which molt to the fourth stage and then to the adult. However, the larvae of T. canis migrate through the liver and lungs, up the bronchi and trachea, are swallowed, and then become adult in the intestine. This tissue-migration phase makes all the difference.

The larvae of T. canis can infect a wide variety of hosts although they cannot develop to maturity in them. They do not even molt to the third larval stage, but simply remain alive in the second stage. Quite a few workers have studied this phenomenon (Schaeffler,[43, 44] Beaver[9]). The larvae can survive in various tissues of the laboratory mouse, rat, hamster, guinea pig, rabbit, and sheep for one or two years, and have been found in the liver of the rhesus monkey for at least seven years after infection. Schaeffler[45] found larvae throughout the bodies, including the brains, of very young lambs which he had infected experimentally, but the larvae were unable to get past the liver of year-old sheep.

Man, too, can be infected with T. canis larvae, and again, the larvae occur in many tissues and organs. Visceral larva migrans occurs primarily in children 16 to 36 months old; it is characterized by hypereosinophilia, hyperglobulinemia, hepatomegaly, and general poor health. Pulmonary symptoms occur in half the cases. Central nervous system involvement is not uncommon. Toxocara endophthalmitis and retinal granuloma generally occur in older children and are apparently sequels of visceral larva migrans.

EGGS EATEN WITH DIRT

Children become infected by eating infective eggs in the soil. Pica (dirt-eating) is therefore an important part of the history. The eggs are not infective when passed, but must first develop on the ground for five days or more.

Visceral larva migrans was first described by Beaver *et al.*[10] in three children in New Orleans. Beaver[8, 9] and Lewis *et al.*[35] reviewed reports of the condition. About 150 cases of human visceral larva migrans and 65 of human endophthalmitis had been reported, mostly in the eastern half of the United States, but also in Hawaii, Puerto Rico, Mexico, Europe, Australia, and the Philippines.

Such figures as these, however, are misleading, since they include only the cases which got into the literature, and omit many others. I know of at least one case in a little girl in Chicago which was diagnosed by Dr. C. A. Krakower of the University of Illinois College of Medicine.

In addition, when one starts looking for cases, he may often find them. Ashton[6] was the first to report ocular lesions due to Toxocara larvae in England, and he stimulated Duguid[19, 20] to make a search for similar cases. The latter then described 28 cases of ocular Toxocara infection which were found at the Institute of Ophthalmology, University of London, when they started looking for them. He said that ocular lesions due to this parasite had in the past been attributed mistakenly to other causes such as organized hemorrhage or exudate, Coats' disease, or choroiditis.

Visceral larva migrans can be diagnosed only by finding the larvae in biopsies. The eosinophilia may be marked; in the Chicago case and in others, eosinophilic leukemia was suspected at first. Vinke, van der Sar, and Jung[51] studied serologic diagnosis in New Orleans but concluded that the Toxocara antigen test was not reliable in diagnosing larva migrans infections. Richards, Olson, and Box,[40] however, found that the sera of two out of 70 children who came to the pediatrics clinic of the University of Texas in Galveston caused a precipitate to form around living T. canis larvae; the children had eosinophilia and a history of dirt eating, but they showed no clinical signs of visceral larva migrans. There is no specific treatment. Diethylcarbamazine seems to hasten recovery in some cases, but I can discover no real enthusiasm for it.

ENUCLEATION UNNECESSARY

Cancer is often suspected in ocular granulomatosis due to Toxocara larvae, and the eye is often

enucleated. This practice is neither necessary nor desirable. The lesions do not progress and may remain static for many years. Duguid,[20] for instance, gave a fundus painting made in 1930 of a probable Toxocara lesion in a child eight years old, diagnosed as "exudative choroiditis," together with a second painting made of the same fundus in 1960; there was very little change in the 30-year interval.

I don't know how common visceral larva migrans is in Hawaii. Dr. G. M. Ewing told Ash[4] that he had found at least two cases among local children, and Ash reported in the same paper T. canis in 24 per cent of 96 stray dogs and 8 per cent of 107 stray cats on Oahu.

Other helminths. Strongyloides stercoralis is a small nematode 1.7-2.4 mm long and 30-40 μ wide which occurs in the mucosa of the small intestine of the dog, cat, fox, chimpanzee, orangutan, and man (Desportes[18]). It is considered more of a tropical and subtropical species than a temperate zone one, but it occurs as far north as Canada. Ash[4] did not find it in a survey of stray dogs and cats in Hawaii, but it may well occur there.

Its life cycle is different from those of most nematodes, since larvae rather than eggs are passed in the feces. The larvae then develop on the ground to the infective stage and enter their new host through the skin.

The worms may cause urticaria, dermatitis, and other sensitization reactions when they enter the skin, bronchopneumonia in migrating through the lungs, and chronic catarrhal inflammation of the intestinal mucosa together with diarrhea, systemic toxemia, and eosinophilia. Man can be infected by canine, feline, or other strains, and vice versa; and the disease is generally more severe in children than in adults.

One reason why Strongyloides has not been found more frequently is that routine fecal flotation technics which are used for nematode eggs rarely reveal Strongyloides larvae. They can be found, however, by mixing a little feces with physiological salt solution or water and examining it under the microscope, or they can be concentrated by allowing them to migrate out of the feces into warm water and then allowing them to fall to the bottom of a funnel or cylinder of the water.

Man acquires his tapeworms by contact with animals. The pork tapeworm, Taenia solium, is acquired by eating improperly cooked pork, and the beef tapeworm, Taeniarhynchus saginatus, by eating improperly cooked beef. Both are rare in the United States. The broad fish tapeworm, Dibothriocephalus latus, is acquired by eating insufficiently cooked freshwater fish, principally pike and pickerel.

The dwarf tapeworm, Hymenolepis nana, is the common tapeworm of man in Hawaii; it has no intermediate host and infection is via eggs from one person to another. Another species, H. diminuta, occurs in rats and may occasionally infect man; its intermediate hosts are various arthropods, especially beetles and fleas, and the definitive host becomes infected by eating these. Ash[5] found H. nana and H. diminuta each in about half of 75 wild Norway and black rats that he examined on Oahu, so these animals are potential sources of human infection.

The common dog and cat tapeworm is Dipylidium caninum. It occurs throughout the world, and Ash[4] found it in 85 per cent of 96 stray dogs and 81 per cent of 107 stray cats on Oahu. Its intermediate hosts are dog and cat fleas. On rare occasions children may become infected by catching and eating fleas from their pets. Authenticated human cases from the United States number 32, but none are from Hawaii (Gleason[26]).

Pinworms, Enterobius vermicularis, are common in children (and not too much less common in adults) throughout the world. They are probably the most common human nematode. The adult females lay their eggs around the anus; these drop off or are rubbed off, develop to the infective stage in a few hours at body temperature, and infect new individuals when ingested. For some reason that I have never been able to fathom, some people think that children acquire their infections from dogs or cats. This is not true. Dogs and cats do not have pinworms, not even of their own. And pinworms are so common in children that there is no need to look further for a source of infection.

Trypanosomosis. Trypanosomes occur in the blood of various animals. They are generally considered exotic, and certainly they are unimportant in the United States. Trypanosoma cruzi, which causes Chagas' disease in man south of the border, is found in woodrats and other wild rodents, opossums, raccoons, skunks, and gray foxes in the Southern states. It is transmitted by the bite of various species of kissing bugs or conenose bugs, members of the hemipteran family, Reduviidae, including the genera Triatoma and Panstrongylus.

Many genera of rodents each have their own species of Trypanosoma. T. lewisi occurs in Rattus, T. duttoni in Mus, T. otospermophili in Spermophilus (ground squirrels) (Levine[34]), etc. According to Davis,[17] trypanosomes similar to T. lewisi were known in 1952 from 80 to 90 species of small mammals throughout the world. The great majority are transmitted by fleas, and all appear to be nonpathogenic. They look alike, but they cannot

be transmitted from one host genus to another under ordinary circumstances.

There is one species, however, which deserves special mention even though we know nothing at present of its ability to infect man. This is Trypanosoma conorhini. It was first found in the reduviid bug, Triatoma rubrofasciata, but has since been found in wild Rattus rattus and R. norvegicus, and can infect the laboratory mouse, white rat, and rhesus monkey experimentally. It occurs in many parts of the tropics and subtropics, including India, Taiwan, Java, Hawaii, and Brazil. Laboratory animals can be infected by eating infected bugs, by contamination of wounds with feces, or by parenteral infection; they cannot be infected by the bites of the bugs.

KAIMUKI DISEASE?

Wood[54] found T. conorhini in Triatoma rubrofasciata in the Kaimuki district of Honolulu. He sent some infected bugs to Johnson,[32] who cultivated the protozoon, and this species is still being maintained by the National Institutes of Health in Bethesda, Maryland. No one knows whether T. conorhini can infect children or whether it could cause disease in them if it did, but the possibility is worth bearing in mind, at least in Honolulu.

Toxoplasmosis. Another protozoon, Toxoplasma gondii, is found throughout the world in man, a wide variety of mammals and even a few birds. It undoubtedly occurs in Hawaii (Stitt and Levine[50]). Because of its importance as a cause of human disease, it has been studied extensively and the literature on it is vast. Galuzo and Zasukhin[24] gave a bibliography which contained 3,706 references, of which 692 were in Russian and 3,004 in other languages. Among books and reviews may be mentioned those of Siim,[47] Maumenee,[37] Levine,[33] Jacobs,[30] Siim, Biering-Sørensen and Møller,[48] and Beattie.[7]

T. gondii is an intracellular parasite of many types of cells. The great majority of infections are asymptomatic, but five types of disease may occur. The most common form in man is congenital toxoplasmosis, which occurs in newborn infants. It is characterized by encephalitis, rash, jaundice, and hepatomegaly, usually associated with chorioretinitis, hydrocephalus, and microcephaly; the mortality rate is high. There are four types of noncongenital or acquired toxoplasmosis. The most common is characterized by lymphadenopathy and may be febrile, nonfebrile, or subclinical. The second type is a typhus-like, exanthematous disease in which there may also be atypical pneumonia, myocarditis, and meningoencephalitis; lymphadenopathy may or may not be present. The third type is a cerebrospinal form characterized by fever, encephalitis, convulsions, lymphadenopathy, and a mononuclear pleocytosis followed by death; this type is quite rare. The fourth type is an ophthalmic form, characterized by chronic chorioretinitis.

Despite the many papers that have been written on it, we still do not know how Toxoplasma is transmitted except in congenital cases; in these it is via the placenta. We do know, however, that Toxoplasma may occur in a number of different animals in a single household. Concurrent infections in man, cats, dogs, or mice in the same house have been reported (Cole *et al.*,[16] Makstenieks and Verlinde,[36] Gibson and Eyles[25]). However, there is no evidence which host got the parasite from which source. I therefore hesitate to include this disease as one which children might get from their pets or from some other animal in the home. I think, however, that it should be mentioned.

ARTHROPODS FROM PETS

Parasitic arthropods. A number of arthropods live in houses. Ordinary bedbugs, Cimex lectularis, are found here; they prefer human blood, but will feed on rats, mice, and even birds if nothing better is available; they may also live in outbuildings such as chicken houses and feed on the chickens. I have already mentioned the kissing bug, Triatoma, which may also live in houses and feed on man and other animals indiscriminately. They are sometimes called giant bedbugs.

Some bird nests are heavily infested by mites, usually of the genus Bdellonyssus or Liponyssus. When the nestlings leave, the mites lose their source of food and must prospect for another. They leave the nest and wander around aimlessly. If the nest is on the ledge or under the eaves of a house, the mites may enter the house and annoy its inhabitants. I have seen a window ledge so covered by these mites that it looked as though it had been lightly dusted with flour. While these mites are generally harmless, they can be a considerable nuisance.

Dog and cat fleas breed in the animals' bedding, in floor cracks and crevices, under carpets, and in debris and dust elsewhere. They are not averse to attacking man, and their bites may cause quite a reaction.

Another parasite, the brown dog tick, Rhipicephalus sanguineus, may infest houses. The adult females lay some thousands of eggs, and the larvae which hatch may be found on the floors, wails, ceilings, curtains, drapes, upholstery, etc. These ticks are brought into the house by dogs. The larvae, nymphs, and adults all prefer to feed on dogs and rarely attack man. Nevertheless, housewives may be terrified by the hundreds or even

thousands of tiny ticks crawling around the house and in their babies' cribs, and they do not take kindly to the assurance that their babies are in little danger. Many brown dog ticks have developed a strong resistance to chemical miticides of all kinds, but they can be eliminated by dusting the house with micronized silica gel (Dri-Die), which scratches their cuticle and makes them die of dehydration.

This list of parasites and diseases which may be acquired in the home from pets and other inquilines is far from complete. I have omitted psittacosis, the parrot's gift to mankind; salmonellosis; and many other diseases. Nevertheless, I think that I have indicated the major possibilities. Children pick up most of their diseases from the school and the movie theater, but they can also acquire some from their pets.

Pets are fine for children, but attention should be paid to the pets' welfare, too. They should be well cared for and well fed. Their diseases should be treated and their parasites should be eliminated. Pets are part of the home biocenose, and healthy pets and healthy people are both necessary for a healthy biocenose. ■

REFERENCES

1. Alicata, J. E.: Angiostrongylus cantonensis (Nematoda: Metastrongylidae) as a causative agent of eosinophilic meningoencephalitis of man in Hawaii and Tahiti, Canad. J. Zool. 40:5-8 1962.
2. Alicata, J. E.: The incidence of *Angiostrongylus cantonensis* (Chen) among rats and mollusks in New Caledonia and nearby islands and its possible relation to eosinophilic meningitis, S. Pac. Com. Tech. Pap. No. 139, Nouméa, New Caledonia. iii + 9 pp. 1963.
3. Alicata, J. E., and Brown, R. W.: Observations on the method of human infection with Angiostrongylus cantonensis in Tahiti, Canad. J. Zool. 40:755-760, 1962.
4. Ash, L. R.: Helminth, parasites of dogs and cats in Hawaii, J. Parasit. 48:63-65 (Feb.) 1962.
5. Ash, L. R.: The helminth parasites of rats in Hawaii and the description of *Capillaria traverae*, J. Parasit. 48:66-68 (Feb.) 1962.
6. Ashton, N.: Larval granulomatosis of the retina due to *Toxocara*. Brit. J. Ophthal. 44:129-148 (Mar.) 1960.
7. Beattie, C. P.: Toxoplasmosis, Roy. Col. Phys. Edinburgh, 1964.
8. Beaver, P. C.: Larva migrans, Exp. Parasit. 5:587-621 (Nov.) 1956.
9. Beaver, P. C.: Toxocarosis (visceral larva migrans) in relation to tropical eosinophilia, Bull. Soc. Path. Exot. 55:555-576 (July-Aug.) 1963.
10. Beaver, P. C., Snyder, C. H., Carrera, G. M., Dent, J. H., and Lafferty, J. W.: Chronic eosinophilia due to visceral larva migrans: Report of three cases, Pediatrics 9:7-19 (Jan.) 1952.
11. Biocca, E.: On *Ancylostoma braziliense* (de Faria, 1910) and its morphological differentiation from *A. ceylanicum* (Looss, 1911), J. Helminthol. 25:1-10, 1951.
12. Biocca, E.: Redescrizione de *Ancylostoma tubaeforme* (Zeder, 1800) parasita de gatto, considerato erroneamente sinonimo di *A. caninum* (Erc. 1859), parasita del cane, Riv. Parrassit. 15:267-278, 1954.
13. Blanc, F., and Nosny, Y.: Évolution de nos connaissances en matière d'éosinophilie tropicale et position actuelle du problème, Bull. Soc. Path. Exot. 55:659-694 (July-Aug.) 1963.
14. Buckley, J. J. C.: Tropical pulmonary eosinophilia in relation to filarial infections (*Wuchereria* spp.) of animals, Trans. Roy. Soc. Trop. Med. Hyg. 52:335-336 (July) 1958.
15. Burrows, R. B.: Comparative morphology of *Ancylostoma tubaeforme* (Zeder, 1800) and *Ancylostoma caninum* (Ercolani, 1859), J. Parasit. 48:715-718 (Oct.) 1962.
16. Cole, C. R., Docton, F. L., Chamberlain, D. M., Sanger, V. L., Prior, S. A., and Farrell, R. L.: Toxoplasmosis in domestic animals, Proc. 15th Intern. Vet. Cong., Stockholm 1:401-405, 1953.
17. Davis, Betty S.: Studies on the trypanosomes of some California mammals, Univ. Calif. Publ. Zool. 57:145-250, 1952.
18. Desportes, C.: Sur *Strongyloides stercoralis* (Bavay 1876) et sur les *Strongyloides* de primates, Ann. Parasit. 20:160-190, 1945.
19. Duguid, I. M.: Chronic endophthalmitis due to *Toxocara*. Brit. J. Ophthal. 45:705-717 (Nov.) 1961.
20. Duguid, I. M.: Features of ocular infestation by *Toxocara*. Brit. J. Ophthal. 45:789-796 (Dec.) 1961.
21. Edeson, J. F. B., and Wharton, R. H.: The experimental transmission of *Wuchereria malayi* from man to various animals in Malaya, Trans. Roy. Soc. Trop. Med. Hyg. 52:25-38 (Jan.) 1958.
22. Edeson, J. F. B., Wharton, R. H., and Buckley, J. J. C.: Filarial parasites resembling *Wuchereria malayi* in domestic and forest animals in Malaya, Trans. Roy. Soc. Trop. Med. Hyg. 49:604-605 (Nov.) 1955.
23. Galliard, H.: À propos de l'étiologie filarienne de l' "éosinophilie pulmonaire tropicale," Bull. Soc. Path. Exot. 55:588-594 (July-Aug.) 1963.
24. Galuzo, I. G., and Zasukhin, D. N.: Toxoplasmosis of man and animals. Bibliography of the native and foreign literature 1908-1962. Izdat. Akad. Nauk Kazakh. SSR, Alma-Ata, Kazakhstan, USSR, 1963.
25. Gibson, C. L., and Eyles, D. E.: *Toxoplasma* infections in animals associated with a case of human congenital toxoplasmosis, Amer. J. Trop. Med. Hyg. 6:990-1000 (Nov.) 1957.
26. Gleason, Neva N.: Records of human infections with *Dipylidium caninum*, the double-pored tapeworm, J. Parasit. 48:812 (Dec.) 1962.
27. Harant, H.: La notion d'impasse en parasitologie: Son incidence dans les éosinophilies tissulaires Bull. Soc. Path. Exot. 55:576-588 (July-Aug.) 1963.
28. Hitch, J. M., and Iralu, V.: Studies relating to creeping eruption, Southern Med. J. 53:447-453 (Apr.) 1960.
29. Horio, S. R., and Alicata, J. E.: Parasitic meningo-encephalitis in Hawaii. A new parasitic disease of man, Hawaii Med. J. 21:139-140 (Nov.-Dec.) 1961.
30. Jacobs, L.: *Toxoplasma* and toxoplasmosis, Ann. Rev. Microbiol. 17:429-50, 1963.
31. Joe, L. K.: Occult filariasis: Its relationship with tropical pulmonary eosinophilia, Amer. J. Trop. Med. Hyg. 11:646-652 (Sept.) 1962.
32. Johnson, Eleanor M.: The cultivation of *Trypanosoma conorhini*, J. Parasit. 33:85, 1947.
33. Levine, N. D.: Protozoan parasites of domestic animals and of man. Burgess, Minneapolis, 1961.
34. Levine, N. D.: Trypanosomes and *Haemobartonella* in wild rodents in Illinois, J. Protozool. 12:225-228, 1965.
35. Lewis, P. L., Yadav, V. G., and Kern, J. A.: Visceral larva migrans (larval granulomatosis). Report of a case and review of the literature, Clin. Pediat. 1:19-26 (Oct.) 1962.
36. Makstenieks, O., and Verlinde, J. D.: Toxoplasmosis in the Netherlands. Clinical interpretation of parasitological and serological examinations and epidemiological relationships between toxoplasmosis in man and in animals, Doc. Med. Geog. Trop. 9:213-224 (Sept.) 1957.
37. Maumenee, A. E., ed.: Toxoplasmosis. Symposium by the Council for Research in Glaucoma and Allied Diseases, November 20, 21, and 22, 1960, Survey Ophthal. 6:699-985, 1961.
38. Mohr. W.: Étiologie des hyperéosinophilies des pays chauds, Bull. Soc. Path. Exot. 55:546-554 (July-Aug.) 1963.
39. Muhleisen, J. P.: Demonstration of pulmonary migration of the causative organism of creeping eruption. Ann. Intern. Med. 38:595-600 (Mar.) 1953.
40. Richards, Barna, Olson, L. J., and Box, Q. T.: Survey of Galveston children for antibodies to Toxocara canis, J. Parasit. 48:501, 1962.
41. Rosen, L., Chappell, R., Laqueur, G. L., Wallace, G. D., and Weinstein, P. P.: Eosinophilic meningoencephalitis caused by a metastrongylid lung-worm of rats, J.A.M.A. 179:620-624 (Feb. 24) 1962.
42. Sandosham, A. A., Wharton, R. H., Warren, M., and Eyles, D. E.: Microfilariae in the rhesus monkey (*Macaca mulatta*) from East Pakistan, J. Parasit. 48:489, 1962.
43. Schaeffler, W. F.: Visceral larva migrans and related diseases in animals Part I. Ill. Vet. 3:99-102, 1960.
44. Schaeffler, W. F.: Visceral larva migrans and related diseases in animals, Part II. Ill. Vet. 4:13-18, 1961.
45. Schaeffler, W. F.: Die Invasion von fremden Wirten durch den Hundeparasite Toxocara canis, Tierärztl. Umschau 16:137-144, 1961.
46. Schneider, J.: L'éosinophilie tropicale n'est pas une maladie, Bull. Soc. Path. Exot. 55:695-697 (July-Aug.) 1963.
47. Siim, J.: Human toxoplasmosis. Williams & Wilkins, Baltimore, 1960.
48. Siim, J. C., Biering-Sørensen, U., and Møller, T.: Toxoplasmosis in domestic animals, Adv. Vet. Sci. 8:335-429, 1963.
49. Smit, A. M.: Eosinophilic meningitis at Kisaran (Indonesia) and the problem of its aetiology, Bull. Soc. Path. Exot. 55: 722-730 (July-Aug.) 1963.
50. Stitt, Pauline G., and Levine, M.: The possible existence of clinical toxoplasmosis in Hawaii, Hawaii Med. J. 12:351-354 (May-June) 1953.
51. Vinke, B., van der Sar, A., and Jung, R.: Détermination de la valeur diagnostique d'un test dans l'infestation à *Toxocara canis*, Bull. Soc. Path. Exot. 55:709-715 (July-Aug.) 1963.
52. Weinstein, P. P., Rosen, L., Laqueur, G. L., and Sawyer, T. K.: *Angiostrongylus cantonensis* infection in rats and rhesus monkeys, and observations on the survival of the parasite *in vitro*, Amer. J. Trop. Med. Hyg. 12:358-377 (May) 1963.
53. Wilson, J. F.: The treatment of larva migrans with stibanose, Southern Med. J. 45:127 (Feb.) 1952.
54. Wood, S. F.: The occurrence of *Trypanosoma conorhini* Donovan in the reduviid bug, *Triatoma rubrofasciata* (Degeer) from Oahu, T. H., Proc. Hawaii Entom. Soc. 12:651, 1946.
55. Wright, D. O., and Gold, E. M.: Loeffler's syndrome associated with creeping eruption (cutaneous helminthiasis), J.A.M.A. 128: 1082-1083 (Aug. 11) 1945.

By controlling infectious diseases and virtually obliterating epidemics, have health departments contributed to the population boom? If so, what—if anything—should health departments do about this?

The Changing Role of Health Departments

ROBERT M. WORTH, M.D., Ph.D.,* *Honolulu*

• *In the United States, the health department has usually appeared on the scene* after *the establishment of vigorous, vocal, influential private medical practitioners in the community. The tasks first assigned to health departments were to do those things perceived by both medical and lay leaders of the community as gaps in private medical services. The filling of these early, self-perceived gaps usually led to a cooperative and mutually satisfactory relationship between private practitioners and health departments. It is of some interest to review here in historical order the recognition of the major lacunae and the peculiarly American pattern of complicated relationships that has arisen from attempts at filling them.*

THE ERA from 1850 to World War I was the period during which American health departments were formed. Their primary responsibility was to control epidemic infectious diseases. The usual pattern was for a private practitioner to serve as a part-time health officer in command of unsophisticated, uniformed health inspectors using direct police action to effect quarantine of persons and condemnation of unsanitary food and water.

These activities won the approval of the private medical community, since they were perceived as being led by the representatives of this group, and affected private practice only to the extent of requiring reporting of certain communicable diseases. A review of accomplishments toward the end of this era would show that although considerable progress had been made, maternal and infant mortality rates were still far from satisfactory, and the growth of urban areas was creating environmental health problems requiring more sophisticated solutions.

THE SECOND PERIOD: 1914-1941

The era from World War I to World War II was characterized by the development of the public health specialist. In response to urban water and sewage problems in New England towns, the Massachusetts Institute of Technology had earlier developed a course called Biology and Public Health, with a primary emphasis on environmental sanitation. (Among those enrolled in 1908-1912 was a young man named Max Levine.) In 1912 this program developed into the Harvard School of Public Health.

During the next few years a new, professionalized kind of health department began to emerge on the American scene. Epidemiologists worked to identify sources of disease transmission in the community. Sanitary engineers grappled with the mounting problems of urbanization and of the food processing industries. Public health laboratories were developed to serve the needs of both the epidemiologist and the engineer.

The full-time professional health officer was developed to coordinate the activities of the other specialists, to appeal directly to the legislature for

* Professor of Public Health, University of Hawaii.

money, and to provide liaison with the private medical community, whose members were by now quite understandably beginning to feel that they might be losing touch with the situation.

Some of these professional health officers began to identify lacunae that were not yet fully perceived by the private practitioners. For the first time, health departments found themselves in the role of proposing new programs that had to be sold, not only to legislatures, but also to the medical community, which began to have divided opinion on the need for extending the scope of health department activities. For example, there was a great selling job in the 1930's on prenatal and well-baby clinics, to give wider application of the sound preventive medical practices already available to more select clientele of the better private medical offices.

SINCE WORLD WAR II

The era since World War II has been characterized by a preoccupation with chronic diseases. We don't know much about the primary prevention of these. Thus, the emphasis is on secondary prevention—seeing to it that both early diagnosis and adequate therapy are available, and used by as many as possible; hence the recent public health interest in medical care facilities[1] and in health education.

The health department does not try to do everything, but does feel a responsibility to see that all the necessary things are done by someone, and that secondary prevention gaps are filled by someone wherever they are perceived. For example, the rising numbers of chronic inmates of mental institutions led to exploratory provision of outpatient services in hope of keeping people out of chronic-ward dumping grounds.

Health departments have been making other exploratory efforts at setting up programs aimed at early diagnosis and adequate treatment of chronic diseases. We know for sure that secondary prevention is far less expensive, both in human and financial terms, than are late diagnosis and custodial care. There is considerable evidence that we are losing ground in this area, and (barring dramatic new discoveries) the worst is yet to come.

The fact is that the well-trained private physician is gradually vanishing from our urban depressed areas. We quote from a recent report emanating from New York[2]:

> Due to . . . the attractions of medical practice in suburbia, the number of physicians practicing in Brooklyn decreased 11 per cent between 1950 and 1960. In a municipal hospital serving a particularly crowded section of that borough, . . . the number of physicians on the hospital staff decreased 31 per cent during these ten years. . . . The average age of the medical staff was over 52, and only one in six was board certified. Many of the specialty clinics in the outpatient department were staffed by general practitioners. . . . Our major deficiencies are in the more densely populated urban communities, like Boston and New York, where family physicians have for several decades been declining quantitatively and qualitatively. The problem is highlighted by the current trend to urbanization. . . . By 1980, about 200 million of an anticipated population of 260 million persons will be concentrated in urban areas. . . . But it can be predicted from past experience that the teaching hospitals which plan to experiment with comprehensive family medical care will encounter formidable roadblocks erected by members of the faculty of the schools and by a large section of the organized medical profession.

URBAN PROBLEMS

And what is to fill this lacuna? The teaching hospital OPD is often too far away, too crowded, and too impersonal to be attractive except to the patient *in extremis*. What good is it for a public health nurse to urge attendance for preventive purposes when the clinic is ten miles away, public transportation is absent or uncomfortable, the clinic wait is an hour or two, and one seldom sees the same doctor more than once?

Here in Honolulu we have so far been spared the staggering dimensions of this problem as presented in our eastern cities, but the small-scale beginnings are already detectable on the local scene. We have difficulty in finding good men to staff certain Health Department clinics. Except for some specialized services for children, we have *no* preventive clinic services available to indigents after age five (unless they happen to be pregnant, and even then we are instructed by the Legislature to "phase out" prenatal work). We hear rumors that one of our best local medical groups talks of building its own hospital because of the economic efficiency inherent in diverting diagnostic procedures and simpler therapeutic procedures away from our major teaching hospitals. This is the first hint of a major withdrawal in our community, one which would have tremendous implications for general hospital economics and standards of quality.

Raising these questions quite understandably arouses the ire of a segment of the private medical community, whose view is limited to their own busy practices. These doctors know they give early diagnosis and proper therapy to their own patients, and they seldom see the type of patient mentioned above. Naturally these physicians long for the "good old days" when the people in health departments could be trusted to "mind their own business."

There is another kind of private practitioner, though, who has a broader perception of the community in which he lives and works, who sees more of the implications of uncontrolled population

growth and urban agglomeration. To him, these thorny questions are real ones. He, too, is interested in searching for their solution in an acceptable American frame of reference. There have been a wide range of experiments trying to find appropriate solutions, both in America and elsewhere.[2]

It is to be hoped that all parties concerned will keep their minds open and will provide the professional environment needed to nurture fruitful relationships between schools of medicine, schools of public health, and teaching hospitals, in order that all can continue honest experimentation directed toward leading us forward in this difficult area of "secondary prevention." If we become divisive and quarrelsome, our problems will surely grow faster than our solutions. The social and financial price paid by our community will grow even faster.

PANDEMICS THREATEN STILL

While preoccupied with secondary prevention problems, today's health officer must also pay attention to infectious disease control programs that are still appropriate. With the ever-increasing amount and speed of international travel and agglomeration of the urban poor, vigilance cannot be relaxed in the area of infectious diseases—as attested to by the recent outbreaks of typhoid in Scotland and smallpox in Europe. and the rise of diphtheria in Los Angeles.

Because epidemiologic activities (and their associated public health laboratory procedures) are several decades old, there is a danger that they may become hallowed by age and therefore continued uncritically without regard to current needs. For example, one wonders about such time-honored nation-wide practices as the mandatory reporting of all measles and chickenpox cases, and the solemn compilation and distribution each month of the absurdly under-reported "statistics." The health officer must repeatedly review his department's activities in these areas, and often finds himself trying to force retrenchments against the bitter opposition of those who feel that their jobs are threatened.

And what of the era ahead? There is only one really serious public health problem ahead of us—overpopulation. It is manifesting itself in four major forms:

1) medical care shortages—mentioned above;
2) starvation on a mass scale—now Asia, soon Africa, then Latin America;
3) environmental pollution from too-rapid urbanization; and
4) psycho-social derangements from the family breakdown that occurs in too-rapid urbanization.

The fruitful developments in preventive and curative medicine in the past few decades have brought death rates down to the point where, for a stable population size, each woman need produce only two or three children, whereas one or two generations ago, she had to produce six to eight.

We must now decide whether to spend all our energies to solve the four problems listed above as they mushroom in front of our eyes (secondary prevention), or whether to divert a significant part of our energies, both in public health and in private practice, toward vigorously selling birth control (primary prevention). In this realm, too, it is clear that primary prevention is far, far less costly, in human and financial terms, than secondary prevention.

I close with an urgent plea that health departments shoulder their share in controlling that same monster which they have played so large a part in creating. ■

REFERENCES

1. Terry, L. L.: The health officer and medical care administration, Amer. J. Public Health 54:1799-1803 (Nov.) 1964.
2. Baehr, G.: The hospital as the center of community medical care: fact and fiction, Amer. J. Public Health 54:1653-1660 (Oct.) 1964.

Clumping of sensitized red blood cells in the presence of serum from enteritic infants may be a useful diagnostic procedure.

The Antibody Response of Children with Enteropathogenic Escherichia Coli Infection

ERWIN NETTER, M.D.,* *Buffalo*

• *E. coli enteritis, now a recognized entity, is usually confined to very young children, though it may occur in older children and adults. In this paper, erythrocytes modified with O antigens were studied in hopes of providing a diagnostic serum test to supplement standard bacteriologic identification methods.*

DURING the past two decades it has been established that certain serologic types of Escherichia coli, in contrast to the vast majority of members of this species, are a cause of enteritis in infants and children. This evidence has been provided by the results of numerous studies carried out in many parts of the world.

Briefly summarized, the evidence is as follows:

(1) During an epidemic of enteritis, notably in newborn infants in nurseries and young children on wards in hospitals, a single serotype is encountered in the majority of affected subjects.

(2) The serotype is usually present in unusually large numbers and as the predominating gram-negative bacillus in the feces of affected infants.

(3) Antibacterial agents effective in vitro against the infecting microorganism have proved to be useful in the specific therapy of infants with the disease and in the control of epidemics.

(4) Studies in volunteers have revealed that strains of these serotypes produce illness, whereas nonenteropathogenic strains fail to do so.

(5) A specific antibody has been demonstrated in some of these patients, notably by means of the hemagglutination test. In view of the capacity of these serogroups to produce enteritis, the term enteropathogenic E. coli has been coined and has found wide acceptance.[1]

Antibody studies of patients with enteric infections have been carried out at this laboratory for several years by means of a hemagglutination procedure.[2, 3, 4] This indirect, passive, or conditioned hemagglutination test is based on the following facts: Red blood cells readily adsorb the O antigens of various enteric bacteria, including enteropathogenic E. coli. As a result, these erythrocytes acquire a new serologic specificity and are agglutinated by the corresponding bacterial O antibodies. With certain erythrocytes, hemolysis takes place upon addition of antibody and complement.[5] Additional studies have revealed that enzyme treatment of erythrocytes makes it possible to detect so-called incomplete O antibodies, a procedure that has proved to be useful for the demonstration of such antibodies in cord serum and in gamma globulin.[6, 7]

* Departments of Pediatrics and Bacteriology, School of Medicine, State University of New York at Buffalo, and Laboratory of Bacteriology, Children's Hospital, Buffalo, New York.

Study aided by Research Grant A1 00658, National Institute of Allergy and Infectious Diseases, U. S. Public Health Service.

In this communication we would like to summarize briefly the results obtained with this serologic procedure on infants with enteropathogenic E. coli enteritis studied from 1962 to 1964.

MATERIALS AND METHODS

The hemagglutination test employed in this study has been described in detail previously.[1, 2, 3] Briefly, erythrocytes (2.5 per cent suspension) from healthy adults of blood group O were washed three times in phosphate hemagglutination buffer. To the packed erythrocytes, antigens of enteropathogenic E. coli serotypes were added in a volume to restore a 2.5 per cent erythrocyte suspension. Similar suspensions of salmonella and shigella antigens were used for control purposes. The mixtures were incubated in a waterbath at 37° C. for 30 minutes. The erythrocytes were again washed three times, in order to remove unattached bacterial antigen.

The titration for the presence of bacterial antibodies was carried out as follows: Serum obtained from patients with enteric infection was used in twofold serial dilutions in a volume of 0.2 ml. Modified erythrocytes (0.2 ml) were then added. The mixtures were incubated in a waterbath at 37° C. and the grossly visible hemagglutination was read after centrifugation at 1300 G for two minutes. The results, ranging from negative to four plus, were recorded.

All serum specimens from patients were kept at –20° C. until used, and all serum specimens from each subject were titrated simultaneously.

In order to differentiate between bacterial O antibodies and antibodies directed against a common antigen of numerous enterobacteriaceae (Kunin *et al.*[8]), inhibition tests were carried out as follows. To serum in twofold serial dilutions (0.2 ml) was added 0.1 ml of supernate from E. coli O-14, containing this common antigen in large amounts. The mixtures were incubated in a waterbath at 37° C. for 30 minutes. Subsequently, modified erythrocytes were added, and the hemagglutination test was read as described above. The E. coli O-14 antigen neutralizes the antibodies against the common antigen, but has no effect on O antibodies.

Antigens from various enteropathogenic E. coli serotypes and of salmonellae and shigellae were prepared as follows: The organisms were grown in Kolle flasks on brain veal agar for 18 hours at 37° C. The resulting growth was suspended in 25 ml of phosphate hemagglutination buffer per Kolle flask. The suspension was heated in boiling water for one hour and centrifuged at 23,500 G. The clear supernate was used as O antigen in a dilution of 1:10 for modification of erythrocytes. This antigen could be stored at –20° C. for prolonged periods of time without loss of potency.

TABLE 1.—*Antibody Response of Infants with E. coli Enteritis.*

PATIENTS	HEMAGGLUTININ TITERS (RECIPROCAL)					
	E. coli					
	O-26	*O-55*	*O-111*	*O-125*	*O-126*	*O-127*
Patient 1.....	10	<10	<10	n.d.	160	<10
Patient 2.....	20	10	20	640	n.d.	20
Patient 3.....	1280	40	40	n.d.	n.d.	40

n.d. = Not done.

ANTIBODY TITERS OBTAINED

During the years 1962-1964, the antibody response of 63 patients with intestinal infection associated with enteropathogenic E. coli was studied. Attempts were made to procure both acute and convalescent blood specimens, but for reasons beyond our control this was not always possible. Single serum specimens were available from 31 patients and two or more specimens from 32 subjects. Even when single specimens were examined, obtained at least five to seven days after onset of clinical illness, significant results were obtained. Table 1 summarizes the data on three infants less than one year of age. Recorded are the antibody titers against the enteric pathogen isolated from the patients and against several other serotypes of E. coli. It can be seen that the homologous antibody titers were considerably higher than the titers of antibodies against serologically unrelated E. coli serotypes.

Although the majority of subjects with enteritis are less than two years of age, infection of older children and adults is seen occasionally. Among the patients of the present series, one child, nine years old, developed sudden vomiting and diarrhea, followed, within six to eight hours, by a shock-like syndrome, necessitating admission to the hospital. Culture of feces revealed the presence of E. coli O-26, and the patient subsequently responded with a rise in antibody titer to 1:640. No other explana-

TABLE 2.—*Antibody Response of 18 Month-old Infant to Double Infection Due to E. coli O-125 and S. typhimurium.*

DATES OF BLOOD SPECIMENS	HEMAGGLUTININ TITERS (RECIPROCAL)	
	E. coli O-125	*S. typhimurium*
6-24-64	160	320
6-25-64	160	1280
6-26-64	160	2560
7-1-64	640	5120
7-2-64	1280	5120

TABLE 3—*Effect of Absorption of Antibodies Against Common Antigen on Titers of O Antibodies in Serum of Infant with Double Infection.*

PATIENT'S SERUM	E. COLI O-26	S. TYPHIMURIUM	E. COLI O-26	E. COLI O-55	E. COLI O-111	SALMONELLA GROUPS C_1	SALMONELLA GROUPS C_2	SHIGELLA MULTIVALENT
			Hemagglutinin Titers (Reciprocal)					
Unabsorbed	320	640	40	80	80	80	80	40
Absorbed	320	640	<20	<20	<20	<20	20	<20

tion for the disease was found on clinical or laboratory grounds. The antibody response provided supportive evidence for the etiological role of enteropathogenic E. coli O-26.

ROLE OF TWO PATHOGENS?

It has been known for many years that some patients with diarrheal disease may excrete two or more enteric pathogens simultaneously and it is usually assumed that the disease is due to more than one pathogen. It must be appreciated, however, that the presence of these pathogens in the feces does not provide unequivocal evidence of their pathogenetic role. It was deemed of interest, therefore, to study the antibody response of such subjects. This opportunity was afforded in four patients. The data of one infant with enteric infection associated with E. coli O-125, or S. typhimurium, or both, are recorded in Table 2. It can be seen that a significant rise in antibody titers against both pathogens occurred within a period of less than eight days. It is likely, therefore, that both microorganisms or their antigens reached antibody-forming cells, resulting in a specific rise in antibody titer. The data further suggest that both microorganisms contributed to the enteric disease, for such antibody rises are not observed against nonenteropathogenic E. coli present in the feces of subjects with salmonella and shigella infection.

In view of the fact that enteric bacteria contain, in addition to the characteristic O antigen, another antigen common to all, additional studies were carried out on selected sera of these patients. Antibodies against the common antigen were eliminated by the addition of common antigen from an antigenically unrelated microorganism, namely, E. coli O-14. The results of a typical experiment are shown in Table 3. It is evident that removal of the antibody against the common antigen did not result in a decrease in the titers of antibodies against the O antigens of the two pathogens, E. coli O-126 and S. typhimurium. In contrast, the titers of antibodies against the other serogroups of Escherichia, Salmonella, and Shigella were significantly reduced by E. coli O-14 antigen. These results confirm similar observations. of Kunin,[9] who showed that the hemagglutination test with high-titered–O antisera does not yield false positive results when antibodies against the common antigen are present in lower titers. Occasionally, however, serum specimens of patients with enteric infection contain antibodies against both O and common antigens in high titers. Under these circumstances, only by removal of the latter antibody is it possible to measure the titer of O antibodies. The data shown in Table 4 are illustrative of such a patient.

DISCUSSION

A significant number of infants and children infected with enteropathogenic E. coli respond with the formation of specific O antibodies. This is shown by the indirect hemagglutination procedure, which has been shown to be more sensitive than the conventional agglutination test. These and previous findings support the etiologic role of enteropathogenic E. coli.

In addition, the determination of the antibody response has provided evidence for the existence of dual infection. In four subjects, excreting both enteropathogenic E. coli as well as another enteric pathogen, such as a member of the Salmonella group, a specific antibody response could be documented against both microorganisms. Previously, we have observed such patients in whom antibodies against only one of the pathogens were produced, suggesting that in these cases the infection was due to only one pathogen and that the subject was a carrier of the other.

SUMMARY

During 1962-1964 a study was made of the antibody response of 63 subjects with diarrheal disease associated with enteropathogenic Escherichia coli. By means of the hemagglutination test, a specific antibody response was detected in 32 of the cases. This figure might have been higher, had

TABLE 4.—*Differentiation Between Antibodies Against O and Common Antigens in Serum of Patient with E. coli O-124 Enteritis.*

SERUM	E. COLI O-124	E. COLI O-26	E. COLI O-55	E. COLI O-111	E. COLI O-127
Unabsorbed	320	640	320	320	640
Absorbed	160	40	10	20	10

convalescent blood specimens been available on all subjects. The antibody response of four patients provided evidence of dual infection. The enterobacterial hemagglutination test appears to be a useful tool to supplement, but not replace, conventional bacteriologic methods for the diagnosis of enterobacterial infections. ■

ACKNOWLEDGMENT

It is a pleasure to express appreciation for excellent assistance to Mrs. Helga von Langendorff, Mrs. Doris Schroeter, and Mrs. Dessie McCartan.

REFERENCES

1. Neter, E., Westphal, O., Lüderitz, O., Gino, R. M., and Gorzynski, E. A.: Demonstration of antibodies against enteropathogenic *Escherichia coli* in sera of children of various ages, Pediatrics 16:801-808 (Dec.) 1955.
2. Neter, E., Westphal, O., Lüderitz, O., and Gorzynski, E. A.: The bacterial hemagglutination test for the demonstration of antibodies to enterobacteriaceae, Ann. N.Y. Acad. Sci. 66:141-156 (Aug. 10) 1956.
3. Neter, E., Gorzynski, E. A., Gino, R. M., Westphal, O., and Lüderitz, O.: The enterobacterial hemagglutination test and its diagnostic potentialities, Canad. J. Microbiol. 2:232-244 (June) 1956.
4. Neter, E., Harris, A. H., and Drislane, A. M.: Comparative study of hemagglutination and agglutination tests for the determination of the antibody response of patients with *Shigella sonnei* dysentery, Amer. J. Clin. Path. 37:239-243 (Mar.) 1962.
5. Neter, E., Bertram, L. F., Zak, D. A., Murdock, M. R., and Arbesman, C. E.: Studies on hemagglutination and hemolysis by *Escherichia coli* antisera, J. Exp. Med. 96:1-15 (July) 1952.
6. Neter, E.: Detection of incomplete enterobacterial antibodies in cord blood by means of antiglobulin hemagglutination test, Proc. Soc. Exp. Biol. Med. 96:488-491 (Nov.) 1957.
7. Neter, E., Drislane, A. M., Harris, A. H., and Gorzynski, E. A.: Study on antibodies against enteric pathogens in human gamma globulin, Amer. J. Public Health 49:1050-1059 (Aug.) 1959.
8. Kunin, C. M., Beard, M. V., Halmagyi, N. E.: Evidence for a common hapten associated with endotoxin fractions of *E. coli* and other enterobacteriaceae Proc. Soc. Exp. Biol. Med. 111: 160-166 (Oct.) 1962.
9. Kunin, C. M.: Antibody distribution against nonenteropathogenic *E. coli*, Arch. Intern Med. 110:676-686 (Nov.) 1962.

Toxoplasmosis, an endemic disease in many animals, may be responsible for that case of eye affliction you saw last week.

Toxoplasmic Antibodies in Southern California and Polynesia

JOHN F. KESSEL, Ph.D.,* WILLIAM P. LEWIS, Ph.D.,* and LEON JACOBS, Ph.D.,† *Los Angeles*

• *The relationship of the protozoon (sporozoon) Toxoplasma gondii to eye disturbances such as chorioretinitis and uveitis has been suggested by antibody studies. However, a goodly percentage of people from the supposedly normal population in various places show elevated titers. Wonder what the toxoplasmic exposure rate in our Hawaiian population would turn out to be if someone were to test for antibodies here?*

STITT AND LEVINE[1] reported a high percentage of toxoplasmic antibodies in the serums of 15 persons with unidentified chorioretinitis in Hawaii and suggested the need for additional work to clarify the significance of this finding.

Feldman and Miller[2] reported a survey of several locales in which sera tested by the methylene blue dye test and read at a titer of 1:16 and above showed results as follows: Alaska, negative; Iceland, 11 per cent; average of five areas in U.S.A., 22 per cent; and three tropical areas yielding higher percentages: Haiti, 36 per cent; Honduras, 64 per cent; Tahiti, 68 per cent.

* School of Public Health, University of California, Los Angeles; Estelle Doheny Eye Foundation, Los Angeles.

† National Institute of Allergy and Infectious Diseases, Bethesda, Maryland.

Aided in part by U.S.P.H.S. Grant No. AI 02070, National Institute of Allergy and Infectious Diseases.

Varela *et al.*,[3] using the same test at a titer of 1:32 and above, found 65 per cent of 17 adults without previous clinical histories, living at elevations below 1,000 feet in Yucatan, Mexico, to be positive. However, of 692 others from Mexico City, Michoacan, Oaxaca, and Tamaulipas, only 36 per cent were positive. Gibson and Coleman[4] reported sera of 94 of 100 persons above 16 years of age in the lower altitudes of Guatemala to be positive, as were 89 per cent of 156 sera from adults in Costa Rica; these were the highest percentages noted to date. Lunde and Jacobs[5] found 55 per cent of 121 sera from all age groups in Trinidad to be positive, by both dye and hemagglutination tests.

When compared with surveys from the temperate zone, the rates of toxoplasmic antibodies seem to be highest in tropical areas; one wonders if the rates of clinical toxoplasmosis are correspondingly higher in the tropics.

SURVEYS REPORTED

Survey 1. Lewis and Kessel,[6] at the Estelle Doheny Eye Foundation, performed indirect hemagglutination (HA), methylene blue dye (MBD), and complement fixation (CF) tests on sera from persons in southern California suspected of having toxoplasmosis. Some 70 per cent of these sera were taken by ophthalmologists from persons with active uveitis or with signs of healed chorioretinitis.

TABLE 1.—*Survey in Normal Population in Southern California for Antibodies of Toxoplasma by Hemagglutination Test.*

AGE GROUPS →	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-49	50 AND OVER
Titers ↓										
1,000,000									1	
32,000								1		1
16,000					1				1	
8,000					1	1	1	1	1	
4,000			1	2		4	1	2	3	1
2,048				3	3	1	1	2	3	1
1,024			1			3	2		1	1
512		1		1	1		1	1	2	
256			1	2	1				1	1
128	2	1			1	1	1		2	1
64			1							
32						1		1		
16	1				1		1			
8						1			1	
neg	27	28	26	22	21	18	22	22	14	24

When the HA test and the MBD test results on 1,466 of these sera were compared, close relationship was seen between these two tests, some 53 per cent of which are positive. Of 293 persons in the adult group (above 20 years of age), 67 per cent displayed positive serology by the HA test. Jacobs and Lunde,[7] Lunde and Jacobs,[5] and Lunde *et al.*,[8] also reported close correlation between these tests.

Survey 2. In order to determine the percentage of sera with antibodies for Toxoplasma in the general population in southern California, sera were collected from a population born in California, unsuspected of having toxoplasmosis, considered to be a normal control group for Survey 1. Table 1 shows the results of the HA test by standard age groups and by titers which range from 1:8 to 1:1,000,000. Of the whole group, 25 per cent are positive. If one considers only persons above 20 years of age, 33 per cent are positive. This is about one half of the 67 per cent found to be positive in Survey 1 of adults with chorioretinitis suspected as toxoplasmic in origin.

Survey 3. To compare a Polynesian group with Feldman and Miller's study,[2] 237 sera from The Society Islands and 33 from American Samoa, were examined by the MBD test. Of the tests performed, 124 were carried out at the Laboratory of Parasitic Diseases, National Institute of Allergy and Infectious Diseases, and 146 in the Estelle Doheny Eye Foundation Laboratory.

Table 2 summarizes Surveys 2 and 3 by age groups. The over-all percentage of positives in these two surveys shows a ratio of 25, in Southern California, to 76, in Polynesia, or about 1:3. This is approximately the same ratio of positive percentages observed by Feldman and Miller[2] between the U.S.A. and Tahiti.

DISCUSSION

A question which has not been answered in the above references is whether clinical toxoplasmosis is also high in areas where prevalence of toxoplasmic antibody is high. Stitt and Levine[1] list 15 cases of chorioretinitis, but do not give the prevalence either for toxoplasmic antibodies or for toxoplasmic uveitis in Hawaii, although chorioretinitis is assumed to be high.

While in Tahiti 1954-1956, one of us (J.F.K.) discussed the question of toxoplasmic uveitis with Dr. Georges Verne, ophthalmologist in the Government Hospital, and asked him to check the cases in the ophthalmologic clinic for toxoplasmic chorioretinitis. Although none was detected during 1955, it must be remembered that the population of the Society Islands was only about 40,000 at

the time, and the estimated rate of acquired toxoplasmic chorioretinitis may not be sufficiently high to be apparent in so small a study.

Iverson,[9] however, in examining 100 Tahitians with high microfilarial counts for lesions which might illustrate the choroidal degeneration in filariasis (described by Leber[10] and Crawford[11]) found none, but did suggest that certain lesions he saw might have been caused by Toxoplasma or other infectious agents.

Iverson *et al.*[12] later reported a series of 17 cases of chorioretinitis, thought to be toxoplasmic in origin, mostly from adults in Nigeria; 88 per cent were positive by the MBD test, while only 35 per cent of a control group in the same hospital, free from chorioretinitis, were positive.

SUMMARY

From the several reports here reviewed or reported, the following points of interest may be listed in summary:

1. Published reports[2, 3, 4, 5, 6, and 12] and Surveys 2 and 3 above suggest that toxoplasmic antibodies are more prevalent at low altitudes in tropical areas than in temperate regions, or in higher altitudes in the tropics. Unfortunately, both clinical and serologic data are rarely available from any region.

2. From Southern California, two surveys are available: one from among the normal population, in which 33 per cent of 180 adults show toxoplasmic antibodies; the second, on adults who showed active or healed chorioretinitis lesions compatible with toxoplasmic uveitis, in which 67 per cent yielded toxoplasmic antibodies. This is a ratio of Positive Normals:Positive Chorioretinitis::1:2.

3. A small but well-documented survey from the Sudan Interior Mission Eye Hospital in northern Nigeria of 17 patients with chorioretinitis and 77 patients without chorioretinitis was reported by Iverson *et al.*[12] Eighty-eight per cent of the chorioretinitis patients and 37 per cent of the non-chorioretinitis patients showed MBD test titers of 1:16 or higher. This is a ratio of Positive Normals: Positive Chorioretinitis::1:2.4.

4. Stitt and Levine[1] in Hawaii found 93 per cent of 15 patients with chorioretinitis, ages 5-48 years, to possess MBD test antibodies at a titer of 1:16 or higher, but provided no control group.

5. Table 2 for Polynesia (Society Islands and American Samoa) shows that 76 per cent of all age groups possess MBD test antibodies to a titer of 1:16 or higher, and 86 per cent of the adults in the Society Islands possess such antibodies. In the Society Islands and in American Samoa, no cases of chorioretinitis or glandular toxoplasmosis have been reported to the authors, although clinicians and ophthalmologists have frequently been asked whether such cases occur. Such queries, however, are not conclusive, and without confirmation by highly reproducible procedures for both clinical and laboratory diagnoses, one can only hypothesize concerning the number of normal persons in Hawaii positive for toxoplasmic antibodies, or the number of clinical cases of toxoplasmosis in Polynesians in Tahiti or Samoa.

If the ratios mentioned above for the Los An-

TABLE 2.—*Serologic Tests by Age Groups in Southern California and Polynesia.*

	SOUTHERN CALIFORNIA		SOCIETY ISLANDS		AMERICAN SAMOA	
	No. +/No. ex.	*% +*	*No. +/No. ex.*	*% +*	*No. +/No. ex.*	*% +*
0-4	3/30	10				
5-9	2/30	7	22/41	54		
10-14	4/30	14	28/40	70	10/14	71
15-19	8/30	27	25/33	76	6/7	86
20-24	9/30	30	31/35	89		
25-29	12/30	40				
30-34	8/30	27	31/36	86	4/6	67
35-39	8/30	27				
40-49	16/30	54	42/52	81		
50+	6/30	20			5/6	83
Totals	76/300	25	179/237	76	25/33	76

geles surveys by the authors and for the surveys in Nigeria by Iverson *et al.*[12] are applied, it would be expected that 50 per cent or more of normal Polynesians in Hawaii would show toxoplasmic antibodies.

On the other hand, it is well-known that strains of Toxoplasma gondii vary in virulence and our knowledge of immunity against Toxoplasma is still meager.

It is possible that strains of low virulence may be more common in the tropics than in temperate regions. Infections with such strains, which produce little or no clinical disease, could well establish the hypothetical ideal balance between host and parasite, where the host is not harmed and the parasite lives happily. This relationship undoubtedly is approached in the majority of infections now occurring, even in temperate regions. If a higher proportion of low virulent strains should occur in an area such as the tropics, one might expect proportionately less clinical toxoplasmosis.

Many questions are still to be answered, and our congratulations and continued best wishes to Dr. Max Levine, who has pioneered so many significant studies in bacteriology and health. We also honor him for having helped to initiate interest in this challenging study of parasitology and health in the tropics. ■

ADDENDUM

Since this manuscript was written a mentally retarded seven-year-old child from Tahiti was referred to Dr. T. L. Munsat of U.C.L.A. for neurologic evaluation. The findings were considered to be consistent with toxoplasmosis, either congenital in origin or acquired in the first six months of life. The child demonstrated a methylene blue dye test titer of 1:512, and the mother a titer of 1:1024.

REFERENCES

1. Stitt, P. G., and Levine, M. N.: The possible existence of clinical toxoplasmosis in Hawaii, Hawaii Med. J. 12:351-354 (May-June) 1953.
2. Feldman, H. A., and Miller, L. T.: Serological study of toxoplasmosis prevalence, Amer. J. Hyg. 64:320-335 (July) 1956.
3. Varela, G., Roch, E., and Vazquez, A.: Virulencia, cultivo, polisacaridos, toxinas y la prueba del colorante, estudiados con una cepa de *Toxoplasma gondii,* Rev. Inst. Salub, Enferm. Trop. 15:73-80 (June) 1955.
4. Gibson, C. C., and Coleman, N.: The prevalence of toxoplasma antibodies in Guatemala and Costa Rica, Amer. J. Trop. Med. and Hyg. 7: 334-338 (May) 1958.
5. Lunde, M. N., and Jacobs, L.: A comparison of results of hemagglutination and dye tests for toxoplasmosis in a survey of Trinidad natives, Amer. J. Trop. Med. and Hyg. 7:523-525 (Sept.) 1958.
6. Lewis, W. P., and Kessel, J. F.: Hemagglutination in the diagnosis of toxoplasmosis and amebiasis, Arch. Ophthal. 66:471-476 (Oct.) 1961.
7. Jacobs, L., and Lunde, M. N.: A hemagglutination test for toxoplasmosis, J. Parasit. 43:308-314 (June) 1957.
8. Lunde, M. N., Jacobs, L., and Wood, R. M.: Comparison of dye and hemagglutination tests on sera of suspected cases of toxoplasmic uveitis, Arch. Ophthal. 69:10-12 (Jan.) 1963.
9. Kessel, J. F.: Uveitis caused by helminths and protozoa, Arch. Ophthal. 59:854-860 (June) 1958.
10. Leber, A.: Eye diseases due to filaria in the South Pacific, von Graefes, Arch. Ophthal. 87:541-548 (Mar.) 1914.
11. Crawford, H. E., Hamman, G. C., and Lanivi, I.: Ophthalmological survey of the Trust Territory of the Pacific Islands, South Pacific Commission, Noumea, New Caledonia, Technical Paper, 67:1-15 (Sept.) 1954.
12. Iverson, H., Hursh, M. D., and Lewis, A.: Toxoplasmosis serological studies on patients with chorio-retinitis in Nigeria, Brit. J. Ophthal. 44:537-540 (Sept.) 1960.

Do abnormal gamma globulins in apparently healthy people necessarily portend later development of clinical myeloma?

Myeloma-type Globulin in Two Blood Donors[1]

GORDON DREESMAN, Ph.D., CHARLES LARSON, B.A., and ALBERT A. BENEDICT, Ph.D., *Honolulu**

• *Two of 1,847 blood donors, both middle-aged men of Hawaiian extraction, carried increased gamma globulins. According to previous reports, abnormal serum spectra may develop several years before clinical myeloma or macroglobulinemia is evident. In some individuals, this abnormal condition of the serum may remain benign.*

A SURVEY of the sera of 1,847 different blood donors at the Blood Bank of Hawaii was made for haptoglobin and transferrin variations in the present-day Honolulu population.[1] In this survey, the serum proteins were studied by means of starch gel electrophoresis, and it was observed that two individuals had greatly increased concentrations of gamma globulins. The electrophoretic patterns resembled those formed by myeloma sera. In view of these findings, further physical and chemical studies were undertaken to determine whether the sera of these two apparently healthy individuals had either gamma-myeloma proteins or proteins characteristic of Waldenström's macroglobulinemia.

MATERIALS AND METHODS

The sera (P.K. and R.M.-1) were obtained from the Blood Bank of Hawaii in October, 1963, and were kindly donated for this study by Dr. L. Beckman. A serum sample from R.M. obtained one year later (November, 1964) will be referred to as R.M.-2. Both serum donors are men in their early fifties, P.K. is of Hawaiian ancestry and R.M. is of Hawaiian-Chinese-Caucasian racial extraction. R.M. was withdrawn from blood donation because of diabetes after October, 1963[1]; however, he was donating blood again in November, 1964. P.K. has continued to donate blood and claims he was healthy and in good condition when Beckman *et al.*[1] observed abnormal gamma globulin in his serum from the October, 1963, and April, 1964, donations.

For control purposes, a serum pool of 12 normal individuals was used. Each serum used for the pool was shown to have normal serum proteins by immunoelectrophoretic criteria. All sera were stored at –20° C. until used.

Analytic ultracentrifugal examination was carried out in a Model E Spinco analytic ultracentrifuge equipped with a Schlieren optical system plate and a temperature control unit. A 12-mm cell was used, and the plates were read with the aid of a Gaertner microscope. The per cent relative composition of each serum protein component was determined by the half-height method.

The serum proteins were separated on paper strips with a Spinco Model R electrophoretic apparatus, by using barbital buffer, pH 8.6, 0.075 ionic strength. After migration, the strips were dyed and analyzed with the Beckman-Spinco Model RB analytrol. The relative percentage of each

[1] This investigation was supported in part by a U. S. Public Health Service Fellowship (1 FI-GM-21, 099-01) to G.D., a U. S. Public Health Service Training Grant (1 TI AI 243-01), and a grant from the Hawaii Heart Association.

* From the Department of Microbiology, University of Hawaii, Honolulu. Publication No. 45 from the Pacific Biomedical Research Center, University of Hawaii.

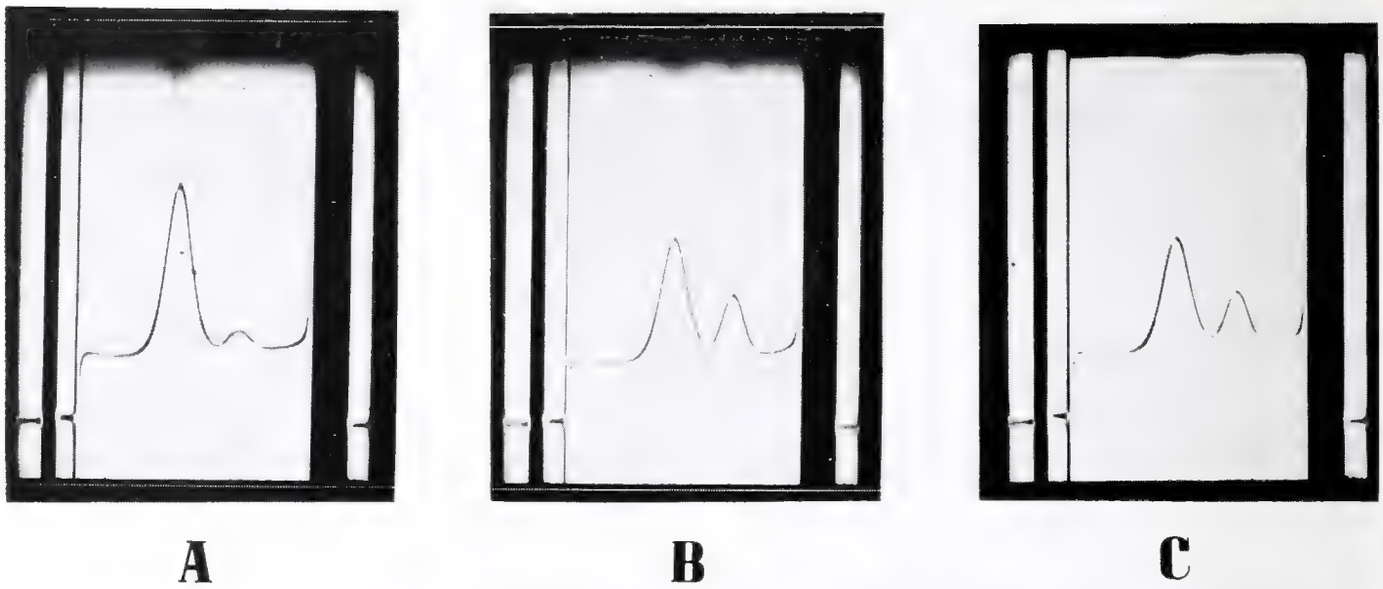


FIG. 1.—*Ultracentrifugal patterns of sera with abnormal γ-globulin. (A) Normal human serum pool. (B) P.K. serum. (C) R.M.-2 serum. Proteins are travelling from left to right; the fastest has a sedimentation coefficient of 7S (γ-globulin), and the slowest one of 4.5 S (albumin). The 20 S co nponent was no longer present at the time of these photographs: 88 min. after reaching speed of 59,780 RPM. Bar angle: 60°.*

protein and the albumin/globulin (A/G) ratios were calculated from these scans.

Immunoelectrophoresis was performed on 1 x 3 inch microscope slides. Electrophoresis was carried out for 60 minutes with a barbital buffer, pH 8.6, 0.025 ionic strength. Precipitin bands were developed with a rabbit antihuman serum and with rabbit antihuman sera made specific to various purified human serum proteins. Identification of types I and II myeloma proteins[2, 3] was made by immunoelectrophoresis employing specific anti-I and anti-II anti-gamma-myeloma rabbit antisera.

RESULTS

Analysis of the P.K. serum and R.M.-1 and R.M.-2 sera by paper electrophoresis revealed greatly increased gamma globulin in each serum. This band in P.K.'s serum migrated as a slow gamma globulin, and the abnormal globulin of R.M. migrated as an intermediate gamma globulin. The results of analysis of the densitometer scans are shown in Table 1. Both individuals had increased gamma globulins as compared with the analysis of the normal serum pool. The A/G ratios of these individuals were calculated from the paper electrophoresis data. The relative percentage of gamma globulin for both individuals was about three times greater than the per cent gamma globulin in the normal serum pool. The A/G ratios of 1.02 for P.K., and of 0.92 and 1.19 of R.M.-1 and R.M.-2, respectively, reflected increased globulin and decreased albumin concentrations. The A/G ratio was 2.59 for the normal serum pool. Although R.M. had been considered a healthy blood donor from October, 1963, to November, 1964, the abnormal gamma globulin persisted for at least this period of time.

The results of ultracentrifugal analyses of a normal human serum pool and of the abnormal sera are given in Figure 1 and Table 2. Three major peaks were observed, with sedimentation coefficients of approximately 4.5 S, 7 S, and 20 S. The 7 S component was greatly increased in the sera containing the abnormal globulins. The 20 S peaks represented less than two per cent of the total serum proteins.

TABLE 1.—*Paper electrophoretic distribution of serum proteins from two individuals with abnormal gamma globulin.*

	PER CENT GLOBULINS AND ALBUMIN OF TOTAL PROTEIN					
SERUM	gamma	beta	$alpha_2$	$alpha_1$	alb.	A/G RATIO
Normal	11	7	7	3	72	2.59
P.K.	34	9	4	2	51	1.02
R.M.-1	29	10	10	3	48	0.92
R.M.-2	33	5	5	3	54	1.19

TABLE 2.—*Ultracentrifugal analysis of the sera from two individuals with abnormal gamma globulin.*

	PER CENT PROTEIN FRACTION		
SERUM	4.5 s*	7 s	20 s
Normal	82	17	< 2
P.K.	69	29	< 2
R.M.-1	71	28	< 2
R.M.-2	72	27	< 2

* Albumin sedimentation coefficient.

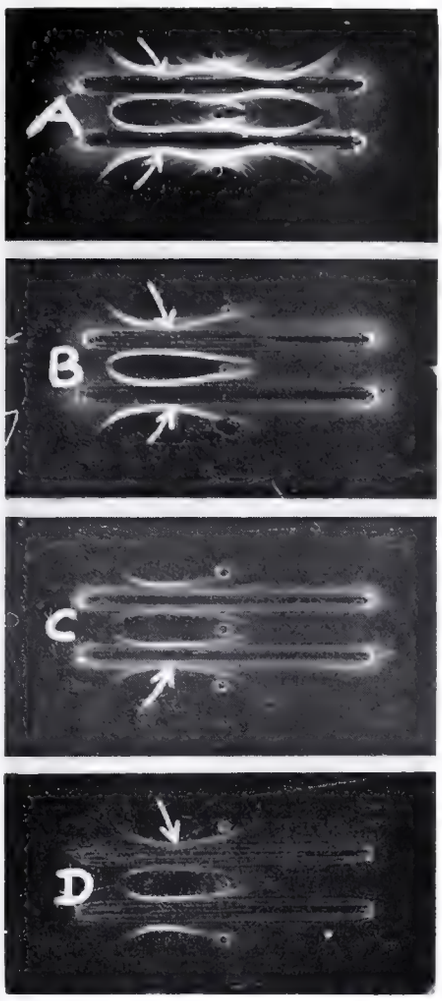


FIG. 2.—*Immunoelectrophoretic analysis of sera with abnormal γ-globulin. P.K. serum, normal serum pool, and R.M.-2 serum were placed in the wells (top to bottom), respectively, of each slide. Antisera added to troughs of each were: (A) Rabbit anti-human serum. (B) Rabbit anti-γ-globulin (7 S). (C) Rabbit anti-type I myeloma γ-globulin. (D) Rabbit anti-type II myeloma γ-globulin. Arrows indicate the characteristic bowed arc of the myeloma globulin.*

Figure 2 presents the results of the immunoelectrophoretic analysis. The precipitin bands developed either with rabbit anti-human serum (Fig. 2A) or with rabbit anti-human 7 S gamma globulin serum (Fig. 2B) resembled those characteristic of myeloma proteins. As is seen in Figures 2A and 2B, both P.K. and R.M.-2 sera showed a localized thickening of a restricted region of the long gamma globulin arc, thus producing the characteristic bowing of the myeloma globulin. The γ_{1a} (β_{2a}) and γ_{1m} (β_{2m}) globulins appeared normal when precipitated with specific antisera. No abnormalities of the α_1 lipoprotein, α_2-lipoprotein, α_2-macroglobulin, and transferrin were observed with specific antisera. Specific anti-type I and anti-type II myeloma antisera were used to determine the type of myeloma globulin present in these two individuals. Figure 2C shows that anti-type I antiserum precipitated the bowed protein in R.M.-2 serum, but not in the P.K. serum. The myeloma-type protein of P.K. was observed with anti-type II and not anti-type I antisera (Fig. 1D).

DISCUSSION

The finding that two individuals with myeloma-type globulins occurred in a sample of 1,847 blood donors in Hawaii is of interest since both individuals claimed to be healthy at the time they donated blood, and one individual (R.M.) had abnormal globulin for at least one year. As revealed by electrophoretic, ultracentrifugal, and immunoelectrophoretic analyses, both individuals had abnormal serum proteins characteristic of 7 S gamma myeloma protein. The abnormal globulin in P.K.'s serum migrated as a slow gamma globulin, whereas the increased globulin of R.M. migrated as an intermediate gamma globulin. This is in accord with the findings of Osserman,[4] who described five multiple myeloma patients in whom the abnormal proteins ranged from a slow gamma to that of a beta-globulin. Immunoelectrophoretic analysis employing specific anti-I and anti-II myeloma antisera confirmed that those proteins in the two local donors were characteristic of the gamma myeloma proteins and that one individual had type I and the other type II myeloma proteins. Fahey and Solomon[5] examined 140 myeloma proteins, macroglobulins, and Bence-Jones protein, and found them to have either type I or type II antigenic determinants; no molecules had both types. On the

other hand, normal immune globulins consist of molecules of both types.[6, 7]

Both individuals had the typical bowed arcs characteristic of myeloma protein in immunoelectrophoresis. The gamma globulin band of P.K., which was a continuation of the 7 S gamma globulin band and fused to the ends of the myeloma-type bow, was not detected when the serum was diluted 1:5 prior to migration in the agar gel. The intensity of the bowed myeloma arc was unaltered in the diluted preparation, indicating that it was present in a high concentration.

The widespread routine use of serum zone electrophoresis has revealed the presence of myeloma-type serum protein peaks in a small but significant number of completely asymptomatic subjects. Osserman[4] reported complete case histories of 24 people who had no radiological or symptomatic evidence of multiple myeloma, but yet had abnormal serum globulins of the myeloma type as shown by paper electrophoresis. Two of the 24 patients observed for a period of four years did develop radiologic evidence of skeletal damage and of disease patterns consistent with a diagnosis of myelomatosis. Four patients of Osserman's study died of other causes; two of these showed primary plasma-cell proliferation disease. Waldenström[8] described 19 patients out of a group of 296 who displayed myeloma-type proteins in their sera, without certain clinical diagnosis. Follow-up studies established that a certain percentage of these patients developed clinically evident myeloma or macroglobulinemia after asymptomatic periods of months or years. Waldenström noted that this benign condition may remain stable in some individuals. Dr. E. R. Giblett (personal communication) has also observed three cases similar to those cited above. One of these three patients who had abnormal myeloma-type globulin developed over symptoms of myeloma seven years after the blood condition was observed.

SUMMARY

Two individuals considered to be healthy blood donors each had abnormal gamma globulins. Electrophoretic, ultracentrifugal, and immunoelectrophoretic analyses showed that they both had elevated concentrations of the 7 S gamma globulins characteristic of the gamma-myeloma proteins. One individual had antigenic type I and the other antigenic type II myeloma proteins. The abnormal protein persisted for at least one year in one of the blood donors. ■

ACKNOWLEDGMENTS

Grateful acknowledgment is given to Dr. W. J. Mandy, Department of Medicine, University of California, Medical Center, San Francisco, for the generous supply of type-specific anti-myeloma antisera, and to Dr. L. Beckman and Dr. M. Yokoyama of the Department of Genetics, University of Hawaii, for various anti-human serum antisera.

REFERENCES

1. Beckman, L., Johnson, F. M., Sakai, R. K., and Woods, J. L.: Serum protein variation in Hawaiian population groups, Acta Genet. (Basel) 14:309, 1964.
2. Korngold, L., and Lipari, R.: Multiple-myeloma proteins, Cancer 9:183 (Jan.-Feb.) 1956.
3. Mannik, M., and Kunkel, H. G.: Classification of myeloma proteins, Bence-Jones proteins, and macroglobulins into two groups on the basis of common antigenic characters, J. Exp. Med. 116:859 (Dec.) 1962.
4. Osserman, E. F.: Natural history of multiple myeloma before radiologic evidence of the disease, Radiology 71:157 (Aug.) 1958.
5. Fahey, J. L., and Solomon, A.: Two types of gamma-myeloma proteins, beta$_{2a}$-myeloma proteins, gamma$_1$-macroglobulins, and Bence-Jones proteins identified by two groups of common antigenic determinants, J. Clin. Invest. 42:811 (June) 1963.
6. Mannik, M., and Kunkel, H. G.: Two major types of normal 7S gamma-globulin, J. Exp. Med. 117:213 (Feb.) 1963.
7. Fahey, J. L.: Two types of 6.6 S gamma-globulins, beta$_{2a}$-globulins and 18 S gamma$_1$-macroglobulins in normal serum and gamma-microglobulins in normal urine, J. Immun. 91:438 (Oct.) 1963.
8. Waldenström, J.: Clinical diagnosis and biochemical findings in 295 sera with M-type marrow gamma-globulins, Acta Med. Scand., Suppl. 367:110, 1961.

Finding the resting place of latent rabies virus in hibernating bats challenges the researcher's inquisitory talents.

Chiropteran (Bat) Rabies in North America

S. EDWARD SULKIN, Ph.D.† *Dallas*

• *Rabies contracted by humans from contact with bats is more common than is generally supposed. Whether the bat is an ancient or recent host of this virus is a difficult question to answer. Since the bat in temperate regions is a hibernator, location of latent virus in such animals has been attempted. The interscapular brown fat or "hibernating gland" seems a likely site.*

INTEREST in bat rabies in North America was first engendered by the various reports dealing with isolations of rabies virus from naturally infected bats.[1, 2] In the research prompted by these observations we have endeavored to go a step or two beyond merely demonstrating the presence of rabies virus in tissues of a certain percentage of bats in a given population.

By studying the experimentally infected bat, we have attempted to learn something of the manner in which rabies virus multiplies in this unusual host.

Therefore, in addition to presenting factual information on the isolations of rabies virus from bats, human exposures to proved or possibly rabid bats, and human deaths resulting from contact with bats, we are herein considering the results of studies on experimental bat rabies infection, together with pertinent facts about the characteristics of Chiroptera which would make them particularly effective reservoir hosts. Thus, we hope to arrive at a better understanding of this host-virus relationship and its importance in the epidemiology of rabies.

1953: FIRST VIRUS ISOLATION

In the years immediately following the first isolation of rabies virus from insectivorous bat species in the United States in 1953, reports of similar isolations appeared in rapid succession in the literature. These observations raised the question as to whether rabies virus had only recently been introduced into insectivorous bat populations or whether this virus had, in fact, been circulating among these animals unnoticed for many years. It is doubtful that the answer to this question will ever be known with certainty.

In insectivorous Microchiropteran species, the information accumulated in the period since the primary isolation leaves no doubt that the bat is now recognized as a natural reservoir host for rabies virus and will continue to be considered in surveys on wildlife rabies. The number of isolations of rabies virus from bats recorded each year has increased dramatically, and instances of bat rabies have been recorded in widely scattered areas of the United States.

Studies referred to in this report were supported by a research grant (AI 02316) from the National Institutes of Health, U. S. Public Health Service, Bethesda, Maryland, and were presented at the Seventh International Congresses on Tropical Medicine and Malaria, Rio de Janeiro, Brazil, September, 1963.

† Professor and Chairman, Department of Microbiology, The University of Texas Southwestern Medical School, Dallas, Texas.

The author acknowledges the association of Rae Allen and Ruth Sims in these studies.

Six human deaths from rabies have followed contact with bats. The increase in the number of bat rabies cases reported undoubtedly reflects an increased awareness on the part of the Public Health Service, and the general public as well, of the danger involved in contact with bats.

Bats found in unusual habitats and behaving abnormally are the ones most often submitted for examination. In some instances small surveys of bat populations located near the site of the exposures have been carried out. The statistics available on bat rabies, therefore, are based largely on bats exhibiting abnormal behavior, and on the nearby populations with which they are assumed to have been associating. In certain instances, however, virus has been isolated from apparently healthy bats.

BRAIN, SALIVARY GLANDS INVOLVED

Studies to be discussed subsequently demonstrate that rabies virus, particularly a strain of bat origin, can be isolated from various tissues, including brain and salivary gland, of asymptomatic experimentally infected bats.[3] It is possible, therefore, that routine large-scale surveys of random bat populations would reveal an even wider dissemination of bat rabies throughout the United States than is currently documented. Indeed, due to the mass movements of the migratory species in the United States and the overlapping of the species territories, there is strong indication that if one tested sufficient samplings, bat rabies could be reported in every state in the Union.

(Dr. Leo Bernstein, Director of Health, State of Hawaii Department of Health, advises that rabies has never been diagnosed in animals, including bats, or in man in Hawaii.)

In reviewing the various Public Health Service reports, it appears that dissemination and reintroduction of rabies infection into areas free of the disease for long periods of time may be the greatest menace of the rabid bat. For example, bat rabies has recently been reported from several states, including Oregon, Montana, Connecticut, and New Jersey, which have been consistently free of sylvatic rabies over the years. In September, 1961, a diagnosis of rabies in a little brown bat in Massachusetts constituted the first case of animal rabies in that state since 1949. It seems evident now that the bat is and deserves to be regularly considered, along with the fox and the skunk, as a factor in the perpetuation of wildlife rabies.

VAMPIRES ARE DANGEROUS

Bat rabies is of much greater importance in Mexico than in the United States because of the presence of the vampire bat. Since biting is a way of life for this bat species, even the asymptomatic animal may spread the disease. It has been estimated that 600,000 head of cattle are lost each year in Mexico through epidemics of rabies spread by the vampire.[4] Mass vaccination programs have now been initiated by the Mexican Department of Agriculture to combat this problem.

Vampire bats have also been responsible for human deaths in Mexico, a total of 40 occurring in a period from April, 1951, to September, 1961. In one instance a single bat was responsible for five human deaths.

BAT RABIES IN CANADA

Three cases of bat rabies have been reported in Canada, two from British Columbia, and one from Ontario. In each instance a human exposure prompted the examination of the bat, but no large-scale surveys have been conducted.

In contrast to the relatively wide distribution of Chiroptera in the greater part of the North American continent, these creatures have a limited range in Alaska. Bats are quite uncommon in this territory and, in consequence, no systematic effort has been made to demonstrate rabies virus in Alaskan bats. Rabies in animals has been found only in the canine, and it has been surmised that bats do not play an important role in the epizootiology of rabies in Alaska.[5]

To understand how the bat may contribute in maintaining the wildlife reservoir of rabies virus, we must learn something of the course of rabies infection in these animals—something more than just how many rabies-infected bats can be recorded in a certain locality, how often livestock and humans are exposed, and how many deaths result. Considering the insectivorous species in the United States, the only way accurate determinations could be established on such characteristics of infection as incubation period, symptomatology, tissue of predilection, and infectivity and mortality would be to study the experimentally infected bat. Only by knowing such facts could one learn something of how the bat would function as a reservoir host and be able to truly evaluate the importance of natural rabies infection in these animals.

BATS PRESENT CHALLENGE

To be able to maintain in a healthy condition in captivity large numbers of bats, considered rather unusual and mysterious even in their natural habitats, was a challenge. The effort would be well spent, however, if it were to prove possible laboratory study of a virus infection in a host in which it occurs in nature, particularly such a bizarre host, in which rabies virus can establish an abeyant existence.

Although early attempts to induce captured bats to accept food were discouraging, eventually a food formula was assembled which the majority of the bats would consume voluntarily and which would nourish these animals satisfactorily[6, 7] for periods exceeding 30 days. No criteria were established to measure the state of health of the surviving bats, but in subsequent studies with gravid bats it was demonstrated that although a percentage of the animals did abort during the course of the experiments, fetal growth and development progressed normally in enough bats to suggest that the conditions of maintenance were satisfactory.[8]

Studies on experimental rabies infection in bats have extended over a period of years. During this time we have attempted to investigate the various aspects of this host-virus relationship which could be applied in understanding natural rabies infection in these animals. These studies have involved the inoculation of large numbers of two species of insectivorous bats with massive doses of two strains of rabies virus, one of canine-human origin and the other isolated from a naturally infected bat.

"BROWN FAT" TESTED

In addition to examining brain and salivary glands for rabies virus, as is ordinarily done, the interscapular brown adipose tissue of these animals was tested for evidence of rabies virus multiplication. This tissue, most abundant in hibernating animals, has been a subject of study by anatomists and physiologists for hundreds of years and still its function has not been defined entirely.[9] Some of the early investigators referred to this tissue as "hibernating gland," believing it to function in controlling hibernation. Subsequently this hypothesis was largely discarded and many investigators doubted that brown fat played any part in directing cycles of winter dormancy. Quite recently, evidence has been presented which assigns brown fat the role of thermogenic effector of arousal in hibernators, suggesting reinstatement of the term "hibernating gland."[10]

Apart from the function this tissue may assume in hibernation, brown fat had attracted the attention of investigators looking for extraneural sites of multiplication of poliovirus and Coxsackie viruses in hamsters and mice.[11, 12] Therefore, in studies on experimental rabies infection in bats, the interscapular brown adipose tissue commanded primary consideration as a site for the establishment of a latent focus of infection. In addition to determining the susceptibility of the bat to rabies virus and to learning something of the tissues involved in the infection,[3] experiments were designed to provide information on the influence of certain physiological alterations on rabies infection in these animals. For example, it seemed of interest to determine what influence periods of hibernation would exert on rabies virus in the bat,[13] and also to learn if rabies infection would in any way be affected by the reproductive cycle of the bat, which extends over a three to four-month period each spring.[8]

When the results of these various studies are viewed in retrospect, the following points seem particularly applicable to a better understanding of rabies infection in the bat and useful in evaluating the public health importance of insectivorous bat species:

CARRIER STATE

1) *Demonstration of the carrier state in bats experimentally infected with rabies virus.* The two species of bats used in these studies, Tadarida b. mexicana, a quasi-hibernator, and Myotis l. lucifugus, a true hibernator, proved to be quite resistant to peripheral inoculation of rabies virus.[3, 13] Virus was recovered from only about 20 to 40 per cent of the experimental animals. The highest infectivity rates were obtained with Myotis inoculated with the bat rabies virus strain.

That the apparently normal bat can harbor rabies virus was shown by the demonstration of virus in the brain, salivary gland, and brown fat of bats exhibiting no signs of illness. The rabies strain of canine-human origin produced overt symptoms in a small percentage of inoculated bats, but the bat rabies virus strain, even though more infective for Myotis, produced a completely silent infection.

The observed variability in the susceptibility of a bat species to different strains of rabies virus may have bearing on the question of whether or not rabies virus has been circulating in bat populations for eons, or whether the bat acquired the infection rather recently. Strains of rabies virus similar to the bat strain used in these studies may have been circulating unnoticed within insectivorous bat populations for thousands of years. Other strains of rabies virus, particularly those isolated from naturally-infected bats showing overt symptoms of disease, appear to be highly infectious for bats.[14] Rabies virus strains which produce overt disease in the bat may have been introduced into the populations by contact with rabid wildlife predators, or mutation of "silent" bat rabies strains could have occurred in bat-to-bat passage, particularly in view of the physiological stresses experienced by these animals in nature (see below).

VIRUS LIPOTROPISM

2) *The tissue tropisms of rabies virus in the experimentally infected bat.* Dissemination of rabies virus among the three tissues tested from experimentally infected bats varied with the strain of

rabies virus used. The canine-human strain proved to be highly neurotropic, being found in the brain of 90 per cent of infected animals and in the brown fat of only 17 per cent to 34 per cent.[3] On the other hand, the bat rabies virus strain which had been isolated from the brown adipose tissue of a naturally infected bat[15] exhibited lipotropic characteristics, being present in the brown fat of 90 per cent of infected animals and in the brains of only 50 per cent.[13] Isolations from the salivary glands were approximately the same with both strains.

These observations suggest that rabies virus strains which circulate in bat populations may differ from strains isolated from other sources, and it would follow that, in the naturally infected bat, virus may more often sequester in brown adipose tissue and spread from this site to the salivary gland. In support of this hypothesis, rabies virus has been isolated from the brown fat of a number of naturally infected bats.[15, 16]

VIRUS SUPPRESSED IN COLD

3) *The influence of low temperature on experimental rabies infection in bats.* One of the most interesting phases of the studies on bat rabies has been that concerned with determining how periods of winter dormancy, experienced by most bat species in temperate regions, might affect natural rabies infections in these animals. The bat is particularly peculiar so far as temperature regulation is concerned, body and environmental temperature being parallel over a wide range and, similarly, the metabolic rate of these animals being quite temperature-dependent.[17] It is not surprising, therefore, that multiplication of rabies virus is suppressed in bats placed in simulated hibernation (4° to 10° C.). Moreover, viability of the virus is sustained during periods in the cold, rabies infection being demonstrable in animals transferred subsequently to a warm environment.[13, 18] The phenomenon of hibernation could have a sparing effect on the course of natural rabies infection in bats, prolonging the incubation period of even the strains most virulent for the bat. Demonstration of the persistence of rabies virus in the experimentally infected bat for long periods of time in the cold suggests that rabies virus can survive in the bat the year round, not only in species that migrate south in the winter but also in the deep hibernating species.

An effort has been made to determine the whereabouts of rabies virus in the hibernating bat. Because of the function of brown fat in sustaining hibernating animals[9] and evidence that this tissue maintains a higher metabolic rate during hibernation than other tissues,[19] the possibility was explored that virus would be demonstrated more frequently in interscapular brown fat than in brain or salivary gland. Although some evidence was obtained that brown adipose tissue did provide a site for storage of rabies virus in the cold bat, the few instances in which virus could be demonstrated in tissues from bats in simulated hibernation precluded firm proof of this thesis. Tissues from cold bats were tested for rabies virus by intracerebral mouse inoculation, a method which possibly was not sensitive enough to detect small quantities of rabies virus or virus in a latent state.

The suppressive effect of low temperature on rabies infection in the bat is particularly pertinent in view of the existing evidence of temperature-induced or temperature-dependent variations in animal viruses.[20, 21] Rabies virus particles existing in the tissues of hibernating bats might well be altered by periods of suppressed activity at below-optimum temperatures. The expression of these alterations in the rabies virus particle could assume various forms; it is in this regard that studies with experimentally infected bats maintained at low temperature might prove to be most important. In experiments referred to previously,[13] it was noted that in inoculated bats held for 14 days at 10° C. prior to maintenance at 29° C., rabies virus could be demonstrated in salivary gland tissue with significantly greater frequency than in groups maintained entirely at 29° C., suggesting a change in tissue tropism. Studies are in progress to determine if alterations in the virulence of rabies virus strains for bats and other animals might be produced by the stress of sustained periods at low temperature, thus accounting for the observed variations in the characteristics of rabies virus strains isolated from bats.[13, 14]

STRESSES ALTER BROWN FAT

4) *Observations on experimental rabies infection in the gravid bat.* Another period of physiologic stress experienced by the bat in nature is the reproductive cycle. Since it has been well documented that pregnancy can alter significantly the course of many viral infections in several hosts, studies on experimental rabies infection in the gravid bat seemed warranted. Although results of these studies showed that the infection rate in bats in various stages of pregnancy did not differ significantly from that found in the nongravid animal, variations were noted in the frequency of isolation of virus from the brown fat.[8] Related observations revealed marked fluctuations in the lipid content of the brown adipose tissue of bats throughout the gestation period.[22, 23] Histologically, the lipid content of the individual cells increases as pregnancy progresses, reaching a peak in the late period and

decreasing precipitously during and shortly after parturition. A similar increase in the lipid content of the brown fat of nonpregnant bats could be induced by treatment with cortisone. These observations suggest that fluctuations in the lipid content of bat brown fat during the reproductive cycle, possibly directed by adrenal function, may influence the multiplication of rabies virus in this tissue. It is hoped that future studies along these lines will serve to clarify the role that the reproductive period of the bat may play in activating latent foci of natural infection, particularly in the brown fat, and in altering strains of rabies virus sequestered in tissues affected by this period of stress.

Evidence of transplacental transmission of rabies virus has been obtained and virus has also been isolated from mammary gland tissue of experimentally infected bats.[8] That rabies virus can be transmitted to the fetus or suckling bat is important in perpetuation of the virus in nature, since the young infected bats may serve as natural reservoirs capable of transmitting rabies infection through successive generations.

VIRUS GROWS IN CULTURED BROWN FAT

5) *In vitro demonstration of the ability of bat brown adipose tissue to support sustained infection with rabies virus.* In the most recent approach to a better understanding of rabies infection in bats, the growth of rabies virus in cultured bat brown adipose tissue has been studied.[24, 25] Evidence of rabies virus multiplication in cultured bat brown fat can be obtained three days after inoculation and will persist for at least 56 days at 37.5° C. Extracellular virus has been quantitated by intracerebral inoculation of culture fluids into mice, and cell-associated virus is best demonstrated by the direct fluorescent antibody (FA) technique. Rabies antigen has been located in the cytoplasm, appearing as diffuse fluorescence, and also in brightly fluorescing, discrete aggregations. When FA preparations are stained with May-Grunwald-Giemsa, the discrete areas of specific immunofluorescence stain as blue inclusion bodies surrounded by halos. No evidence of cell degeneration attributable to virus infection has been observed, despite the appearance of inclusions and the evidence of virus multiplication. The multiplication of rabies virus in cultures of bat brown adipose tissue is suppressed by low temperature in a manner similar to that observed in the bat. Although no virus can be demonstrated in the fluids of cold cultures, cell-associated virus is made visible by the FA technique. Rabies virus will persist for more than four months in infected cultures held at 8° C. Following transfer to 37.5° C., virus is again demonstrable in culture fluids and the cells exhibit brilliant specific immunofluorescence.

These studies provide further evidence to support the theory that the interscapular brown adipose tissue of the bat is capable of sustaining latent rabies infection and contributing to the ability of this animal to act as a natural reservoir host for this agent. ■

REFERENCES

1. Venters, H. D., Hoffert, W. R., Scatterday, J. R., and Hardy, A. V.: Rabies in bats in Florida, Amer. J. Public Health 44: 182-185 (Feb.) 1954.
2. Sullivan, T. D., Grimes, J. E., Eads, R. B., Menzies, G. C., and Irons, J. V.: Recovery of rabies virus from colonial bats in Texas, Public Health Rep. 69:766-768 (Aug.) 1954.
3. Sulkin, S. E., Krutzsch, P. H., Allen, R., and Wallis, C.: Studies on the pathogenesis of rabies in insectivorous bats. I. Role of brown adipose tissue, J. Exp. Med. 110:369-388 (Sept.) 1959.
4. Malaga Alba, A.: The problems of rabies in bats, Presented at the 19th Annual Meeting, United States-Mexico Border Public Health Association, San Diego, California, June 25-29, 1961.
5. Rausch, R.: Some observations on rabies in Alaska, with special reference to wild canidae, J. Wildlife Management 22:246-260 (July) 1958.
6. Krutzsch, P. H., and Sulkin, S. E.: The laboratory care of the Mexican free-tailed bat, J. Mammal. 39:262-265 (May) 1958.
7. Sulkin, S. E., Allen, R., and Sims, R.: Studies of arthropod-borne virus infections in Chiroptera. I. Susceptibility of insectivorous species to experimental infection with Japanese B and St. Louis encephalitis viruses, Amer. J. Trop. Med. Hyg. 12:800-814 (Sept.) 1963.
8. Sims, R. A., Allen, R., and Sulkin, S. E.: Studies on the pathogenesis of rabies in insectivorous bats. III. Influence of the gravid state, J. Infect. Dis. 112:17-27 (Jan.-Feb.) 1963.
9. Johansson, B.: Brown fat: a review, Metabolism Clin. Exp. 8:221-240 (May) 1959.
10. Smith, R. E., and Hock, R. J.: Brown fat: thermogenic effector of arousal in hibernators, Science 140:199-200 (Apr. 12) 1963.
11. Shwartzman, G.: Enhancing effect of cortisone upon poliomyelitis infection (strain MEF1) in hamsters and mice, Proc. Soc. Exp. Biol. Med. 75:835-838 (Dec.) 1950.
12. Pappenheimer, A. M., Daniels, J. B., Cheever, F. S., and Weller, T. H.: Lesions caused in suckling mice by certain viruses isolated from cases of so-called non-paralytic poliomyelitis and of pleurodynia, J. Exp. Med. 92:169-199 (Aug.) 1950.
13. Sulkin, S. E., Allen, R., Sims, R. A., Krutzsch, P. H., and Kim, C.: Studies on the pathogenesis of rabies in insectivorous bats. II. Influence of environmental temperature, J. Exp. Med. 112: 595-617 (Oct.) 1960.
14. Burns, K. F., Shelton, D. F., and Grogan, E. W.: Bat rabies: experimental host transmission studies, Ann. N. Y. Acad. Sci. 70:452-466 (June) 1958.
15. Bell, J. F., and Moore, G. J.: Rabies virus isolated from brown fat of naturally infected bats, Proc. Soc. Exp. Biol. Med. 103: 140-142 (Jan.) 1960.
16. Sulkin, S. E.: The bat as a reservoir of viruses in nature, Progr. med. Virol., vol. 4 (Karger, Basel/New York), 1962.
17. Hock, R.: The metabolic rates and body temperatures of bats, Biol. Bull. 101:289-299 (Dec.) 1951.
18. Sadler, W. W., and Enright, J. B.: Effect of metabolic level of the host upon the pathogenesis of rabies in the bat, J. Infect. Dis. 105:267-273 (Dec.) 1959.
19. Hook, W. E., and Barron, E. S. G.: The respiration of brown adipose tissue and kidney of the hibernating and non-hibernating ground squirrel, Amer. J. Physiol. 133:56-63 (May) 1941.
20. Dubes, G. R., and Wenner, H. A.: Virulence of polioviruses in relation to variant characteristics distinguishable on cells *in vitro*, Virology 4:275-296 (Oct.) 1957.
21. Fenner, Frank: Myxomatosis, Brit. Med. Bull. 15:240-245 (Sept.) 1959.
22. Sims, R. A., Allen, R., and Sulkin, S. E.: Influence of pregnancy and cortisone treatment on brown adipose tissue in bats, Proc. Soc. Exp. Biol. Med. 111:455-458 (Nov.) 1962.
23. Sulkin, S. E., Allen, R., and Sims, R. A.: Growth of rabies virus in brown adipose tissue *in vivo* and *in vitro*, Symposium International sur la Rage, Talloires, Lac d'Annecy, France, Mai, 1965, in Progress in Immunobiological Standardization (Series B); S. Karger, S. A. Basel/New York, in press.
24. Allen, R., Sims, R. A., and Sulkin, S. E.: Studies with cultured brown adipose tissue. I. Persistence of rabies virus in bat brown fat, Amer. J. Hyg. 80:11-24 (July) 1964.
25. Allen, R., Sims, R. A., and Sulkin, S. E.: Studies with cultured brown adipose tissue. II. Influence of low temperature on rabies virus infection in bat brown fat, Amer. J. Hyg. 80:25-32 (July) 1964.

Two-day-old chicks proved useful to study in vivo activity of typhoid organisms.

Intracerebral Virulence of Salmonella typhi Strains in Chicks

INN SOO SUH, M.D., Dr.Med.Sci.,* and
MORRIS F. SHAFFER, Ph.D.,† *New Orleans*

• *Four strains of Salmonella typhi infected the brains of two-day-old chicks with no obvious differences in rates of proliferation. Rate of bacteremia and spread to other sites did, however, vary among the typhoid strains. Such basic examinations of host-parasite interrelationship may contribute greater understanding of prevention, treatment, or both.*

WHILE MUCH useful information has come from laboratory studies with such animal species as chimpanzees and rabbits, many investigators have preferred to use mice for the production of experimental Salmonella typhi infections and for analysis of the role of various constituents of the microbe in virulence for the host. In most such studies the intraperitoneal route of inoculation has been employed; but because of dissatisfaction with the lack of sensitivity of this method, Norton and Dingle[6] explored the possibility of intracerebral infection.

They found that fatal disease could thereby be initiated with far fewer organisms, particularly if a freshly isolated strain of typhoid bacilli was used. Subsequent work showed that there are disparities in natural resistance to intracerebral infection among genetically classified stocks of mice. By selecting a suitably susceptible stock, one can demonstrate significant differences in virulence among typhoid strains, correlated in part with their antigenic composition (Landy, Gaines, and Sprinz[4]; Sacquet[7]; Standfast[9]; Gaines and Tully[2]).

It has recently been reported that chicks shortly after hatching are highly susceptible to intracerebral infection with S. typhi (Shaffer *et al.*[8]). It seemed worthwhile, therefore, to examine further the virulence of a group of microbial strains known to vary in antigenic constitution. Whether correlation exists between such antigenic differences and the extent to which the strains multiply in the brains of infected chicks was also to be determined.

MATERIALS AND METHODS

Cultures. Strains H-901, O-901, Ty 2 and Vi I of S. typhi were maintained as lyophilized stocks. When needed, they were reconstituted and checked for: purity; colonial morphology; typical pattern of cultural and biochemical properties; serologic behaviour with antisera versus various antigenic factors (kindly supplied by Mr. A. Abrams, Walter Reed Army Institute of Research). The antigenic composition of the strains was further verified by immunizing rabbits and checking the resultant antisera in agglutination tests with appropriate cultures.

From trypticase soy broth cultures grown at 37° C. for 5 hr., serial decimal dilutions were prepared with buffered saline and certain of these were used to inoculate chicks. Samples of selected dilutions were also spread on the surface of agar plates to enumerate the viable organisms.

Host Fowl. New Hampshire Red chicks obtained from local commercial sources immediately after hatching were identified with serially numbered wing bands. They were housed and maintained as described previously.[8] After intracerebral injections (0.05 ml) were made, the animals were examined at frequent intervals and at death were autopsied promptly or after storage for a few hours in the refrigerator. Cultures were made from the entire spleen and from a minute portion of brain, as in the earlier study, to detect the presence of infection. In addition, for quantitative assay the remaining brain was removed to a sterile mortar and the cranium was washed out with 1 ml of broth. The latter was used in grinding the brain, with more broth added to a total of 5 ml. Serial decimal dilutions of the resultant suspension were plated to enumerate the bacteria present. Representative colonies were tested by cultural, biochemical and serological methods to identify them as S. typhi of the variety inoculated.

* Present address: Department of Microbiology, Soo Do Medical School, Seoul, Korea.
† Department of Microbiology, Tulane University School of Medicine, New Orleans, La.

RESULTS

Groups of two-day-old chicks were injected with one of the four S. typhi strains under examination. From the results (Table 1), it was evident that for H-901, O-901, and Ty 2 as few as five to 12 viable organisms usually sufficed to evoke fatal disease, so that for each strain the LD_{50} was <10 bacilli. Most of the birds dying yielded S. typhi in cultures from spleen as well as brain, evidence of bacteremic spread. For a given strain, tenfold differences in size of inoculum did not commonly affect the outcome except in terms of the duration of infection prior to death.

In the groups given Vi I organisms, results differed somewhat in the two experiments. In the first trial, three of six birds receiving 75 "viables" survived four days, whereas in the second assay all birds succumbed within two days after administration of 60 viables. Again, in the first trial only four of 18 chicks yielded positive spleen cultures, while in the second a majority did so.

For each strain, birds which died within four days after receiving the smaller inocula were examined to ascertain the intracranial content of S. typhi. It was found (Table 2) that the yield of organisms varied considerably among individual birds; in view of the small number of animals per group, it appeared unwise to calculate any average figures.

Among birds dying after the same interval of infection there was marked disparity in the bacterial population. Where birds in a group died at different times, those succumbing on the second day usually yielded the greatest numbers; but even in birds dying within 24 hr. after receiving five-12 organisms, the cranium often contained millions of S. typhi. In only two birds were less than 5×10^5 organisms found there at death. Ten-to-hundredfold variations in size of inoculum did not seem to

TABLE 1.—*Lethality and invasiveness of S. typhi strains following intracerebral inoculation of chicks.*

EXPT.	STRAIN	INOCULUM (Viables)	OUTCOME	TERMINAL CULTURES Brain	Spleen
1	H-901	125	D_1† D_1 D_2 D_2 D_3 D_3	6/6‡	6/6
		12	D_2 D_3 D_3 D_3 D_3 S_4*	6/6	5/6
	O-901	125	D_1 D_1 D_2 D_3 D_4 D_4	6/6	5/6
		12	D_2 D_2 D_2 D_2 D_4 S_4	6/6	6/6
	Ty 2	125	D_1 D_1 D_1 D_1 D_1 D_1	6/6	6/6
		12	D_1 D_1 D_2 D_2 D_3 D_3	6/6	6/6
	Vi I	7500	D_1 D_1 D_3 D_3 D_3 D_3	6/6	0/6
		750	D_1 D_1 D_3 D_3 D_3 S_4	5/6	3/6
		75	D_1 D_3 D_4 S_4 S_4 S_4	6/6	1/6
2	Ty 2	50	D_1 D_2 D_2 D_3 D_3 D_3	6/6	5/6
		5	D_2 D_2 D_2 D_3 S_4 S_4	6/6	5/6
	Vi I	600	D_1 D_2 D_3 D_3 S_4	5/5	4/5
		60	D_2 D_2 D_2 D_2 D_2 D_2	6/6	5/6
		6	D_2 D_2 D_2 D_2 D_3 S_4	5/6	3/6

† D_1 = death within 1 day following inoculation.
* S_4 = survival for 4 days following inoculation.
‡ Number of birds (dying spontaneously or sacrificed) which yielded positive cultures from organs/total number examined.

TABLE 2.—*Intracranial yield of S. typhi from chicks dying within 4 days of inoculation.*

STRAIN	EXPT.	INOCULUM (Viables)	DURATION OF INFECTION (Days)	YIELD FROM INDIVIDUAL BIRDS (Millions)
H-901	1	12	2	210
			3	0.5; 12; 12; 170
O-901	1	12	2	<0.5; 4.3; 10; 21
Ty 2	1	12	1	7; 120
			2	700; 1400
			3	0.5; 1200
	2	50	1	34
			2	2900; 8500
			3	5.5; 6.0; 17
		5	2	375; 450; 630
			3	6.5
			4	1.5; 5.6
Vi I	1	75	1	16
			3	<0.5
	2	600	1	160
			2	5900
			3	700; 1400
			4	57
		60	2	10; 140; 900; 1800; 1900; 2100
		6	2	21; 36; 63; 2000
			3	5.5

make any consistent difference in the bacterial yield. Investigation showed that the variation in counts was not attributable to differences in the interval between the time of death and the start of autopsy.

DISCUSSION

Since the ground-breaking experiments of Norton and Dingle,[6] the intracerebral LD_{50} values for certain well-known typhoid strains of varying antigenic composition were found to have the following ranges when tested in particularly susceptible stocks of mice (e.g. BALB/c or C_3H):

Ty 2V (Vi + O + H +): $< 200 - 1.4 \times 10^3$ (viables)
Ty 2W (O + H +): 1.5×10^4
H-901 (O + H +): $1.3 \times 10^4 - 5.6 \times 10^6$
O-901 (O +): $3.7 \times 10^4 - 5.0 \times 10^6$
Vi I (Vi + O trace): $1.2 \times 10^6 - > 10^7$

(Landy, Gaines, and Sprinz[4]; Sacquet[7]; Gaines and Tully[2, 3]; Gaines, Tully, and Tigertt[3]; Tully and Gaines[11]; Tully and Currie[10].) In C1 mice, Standfast[9] obtained the following intracerebral LD_{50} values: for Vi-positive strains, $2.7 \times 10^2 - 1.6 \times 10^3$; for stable Vi-negative strains, $2.4 \times 10^3 - 1.0 \times 10^4$; for Vi-negative strains which reverted to the Vi-positive state on a single passage through mice, $1.5 \times 10^3 - 3.1 \times 10.^4$

In Ty 2W or O-901, naturally lacking Vi, admixture with purified Vi antigen at the time of intracerebral inoculation increased the virulence of these strains (Gaines, Tully, and Tigertt[3]). Similarly, addition of purified O antigen to an intracerebral inoculum of the O-deficient Vi I strain (as well as to Ty 2V or Ty 2W) was observed to enhance virulence (Gaines and Tully[1]).

Based on the foregoing and other observations it has been concluded that while the presence of both Vi and O is necessary to endow S. typhi with maximal mouse-virulence, Vi is the major factor. The mode of action of Vi is by no means clear, but it has been suggested that this antigen may somehow enhance the rate of increase of the inoculum in vivo (Young and Felsenfeld[13]; Gaines, Tully, and Tigertt[3]). The O antigen may conceivably contribute to mouse-virulence by virtue of its endotoxic effects at the outset of infection (Gaines and Tully[1]). The flagellar antigen does not appear to exert a significant effect on intracerebral mouse-virulence (Gaines and Tully[2]; Tully and Gaines[11]).

When tested intracerebrally in two-day-old chicks in these experiments the strains H-901, O-901, and Ty 2 were each of essentially maximal virulence with the $LD_{50} < 10$ viables. In previous trials, another Vi + O + strain (Watt) gave comparable results (Shaffer *et al.*[8]). It appears that for these four strains, the smallest inoculum which introduces viable bacilli into the cranium of the young chick may suffice to initiate ultimately lethal disease. No significant differences have been noted among these strains in the ability to spread via the blood and to localize in organs such as spleen, or in the time required to cause death.

The behaviour of Vi I is rather different as judged from the four experiments, those described above and two reported previously (Shaffer *et al.*[8]) in which its intracerebral infectivity for one- or two-day-old chicks was assayed. In the earlier study, with inocula of $7.5 \times 10^3 - 1 \times 10^4$ viables only two of 12 birds yielded S. typhi from the spleen, although ten of the group died; with $6 \times 10^2 - 1 \times 10^3$ viables, 15 of 23 birds succumbed and 12 had infected spleens; with $6 \times 10^1 - 1 \times 10^2$ viables, 11 of 18 birds died and ten spleens were found to contain the organisms. The fluctuating capacity of Vi I to evoke fatal disease suggests a certain degree of vulnerability of this strain to the defenses of the young chick; the organisms seem to be relatively deficient in the ability to pass from the primary cranial focus via the circulation and to colonize secondarily in other organs such as the spleen. Yet

the strain must be regarded as possessing considerable virulence, since it is capable of killing some chicks when given intracerebrally in doses as small as six viables. In previous experiments by Weidanz and Shaffer,[12] wherein embryonated eggs were inoculated via the allantoic sac, Vi I was found to grow in that cavity at the same rate as Ty 2. As few as 12 organisms of Vi I proved capable of initiating fatal infections, but with varying doses the proportion of deaths was regularly smaller than for embryos receiving comparable inocula of Ty 2.

As regards the yield of S. typhi in the cranium, it is clear that there is marked variation among chicks irrespective of the microbial strain or dose inoculated, or the duration of infection prior to death. Nevertheless, the following conclusions seem warranted from the data: (1) each of the four strains examined is capable of attaining, within 48 hours, numbers in the millions from inocula of less than 15 viables; (2) Vi I multiplies intracranially at a rate and attains a peak level not significantly different from Ty 2. In experiments with mice given approximately $4x10^4 - 4x10^5$ viables of Ty 2, it has been observed that peak values of $4x10^8 - 1x10^9$ are not reached before 96 hours (Landy, Gaines, and Sprinz[4, 5]). The intracerebral multiplication of S. typhi in the chick may therefore be perhaps even more rapid than in the mouse.

Comparison of our findings with those reported by others for adult mice makes it evident that the intracerebral virulence of the strains studied is greater in chicks, provided that they are inoculated during the first few days after hatching. Under such conditions death usually follows within one to three days, even with minimal inocula, so that tests with chicks may have an additional advantage over those with intracerebrally inoculated mice, which require a much longer period of observation. It should be pointed out that certain breeds of chicks are inherently more refractory than others and in all varieties resistance increases with advancing age, as manifested by prolongation of the course of illness and fewer fatalities; but the organisms can often be recovered from brain, blood, and viscera of survivors for relatively long periods (Shaffer *et al.*[8]). There should be no great difficulty in locating useful stocks, however; by selecting birds of proper strain and age the course of infection can be varied to suit the experimenter's purposes.

None of the three antigenic factors, Vi or O or H, appears to be indispensable for intracerebral chick-virulence of S. typhi since strains lacking any one of these factors have been shown capable of evoking fatal disease with small inocula. The results of the present study do not invalidate the interesting data obtained from experiments in mice, but they do lead to the as-yet-unanswered question: what are the microbial factors which contribute decisively to the virulence of S. typhi as measured by the intracerebral route of infection in chicks?

SUMMARY

Four strains of S. typhi were compared for their ability to initiate infection by the intracerebral route in two-day-old chicks. H-901, O-901, and Ty 2 killed within a few days the majority of birds inoculated with as few as 10 viables. Vi I was likewise capable of killing chicks which received similar doses. All four strains usually attained levels of many millions in the brain by the time of death and there were no obvious differences among them in the extent of microbial proliferation in this site. H-901, O-901, and Ty 2 frequently invaded organs, such as the spleen, after escaping from the primary cranial focus; Vi I was less regularly able to spread via bacteremia and maintain itself in other organs. ■

ACKNOWLEDGMENTS

I. S. Suh was a Fellow of the China Medical Board during the tenure of this work which was conducted under the sponsorship of the Commission on Enteric Infections, Armed Forces Epidemiological Board, and was supported by the Office of the Surgeon General, Department of the Army, U.S.A.

The authors are indebted to Kamma C. Pontoppidan for technical assistance.

REFERENCES

1. Gaines, S., and Tully, J. G.: Effect of typhoid O antigen (endotoxin) on the virulence of an O-deficient variant of *Salmonella typhosa*, Amer. J. Hyg. 73:224 (Mar.) 1961.
2. Gaines, S., and Tully, J. G.: Comparison of intracerebral and intraperitoneal infective techniques for assaying mouse virulence of *Salmonella typhosa* strains, Amer. J. Hyg. 74:60-6 (July) 1961.
3. Gaines, S., Tully, J. G., and Tigertt, W. D.: Enhancement of the mouse virulence of a non-Vi variant of *Salmonella typhosa* by Vi antigen, J. Immun. 86:543 (May) 1961.
4. Landy, M., Gaines, S., and Sprinz, H.: Studies on intracerebral typhoid infection in mice. I: Characteristics of the infection, Brit. J. Exp. Path. 38:15 (Feb.) 1957.
5. Landy, M., Gaines, S., and Sprinz, H.: Studies on intracerebral typhoid infection in mice. II: Immunological factors concerned in protection, Brit. J. Exp. Path. 38:25 (Feb.) 1957.
6. Norton, J. F., and Dingle, J. H.: Virulence tests for typhoid bacilli and antibody relationships in antityphoid sera, Amer. J. Public Health 25:609 (May) 1935.
7. Sacquet, E.: Contribution a l'étude de la sensibilité de diverses lignées de souris a l'inoculation de *Salmonella typhi*, Ann. Inst. Pasteur. 98:880 (June) 1960.
8. Shaffer, M. F., Bridges, J. F., Clemmer, D. I., and Pontoppidan, K. C.: Susceptibility of chicks to experimental infection with *Salmonella typhosa*, Amer. J. Hyg. 80:377 (Nov.) 1964.
9. Standfast, A. F. B.: Experiments with Vi-negative strains of *Salmonella typhi*, Bull. WHO 23:47, 1960.
10. Tully, J. G., and Currie, J. A.: Vi-negative strains of *Salmonella typhosa:* attempts to induce W-V reversion and the use of non-Vi strains in evaluating typhoid vaccines, J. Bacteriol. 84:747 (Oct.) 1962.
11. Tully, J. G., and Gaines, S.: H antigen of *Salmonella typhosa*, J. Bacteriol. 81:924 (June) 1961.
12. Weidanz, W. P., and Shaffer, M. F.: Hypoglycemia in chicken embryos infected with *S. typhosa* via the allantoic cavity, Proc. Exp. Biol. Med. 111:655 (Dec.) 1962.
13. Young, V. M., and Felsenfeld, O.: The importance of the Vi antigen, Amer. J. Dig. Dis. 14:349 (Nov.) 1947.

(To be made one and eight copies)

FIRST LEGISLATURE, 196 1
STATE OF HAWAII

H.C.R. NO. 69

HOUSE CONCURRENT RESOLUTION

WHEREAS, Dr. Max Levine has devoted thirteen years to public service as the first Director of the Bureau of Laboratories of the Department of Health of the State of Hawaii, and has recently retired; and

WHEREAS, Dr. Levine has gratuitously given his consulting service with regard to sewage disposal in the City of Honolulu, sewage purification in Wahiawa, Oahu, and water treatment in Honokaa, Hawaii; and

WHEREAS, Dr. Levine serves without compensation on the faculty of the University of Hawaii advising graduate students majoring in microbiology; and

WHEREAS, Dr. Levine serves on numerous committees of the American Public Health Association and the American Waterworks Association bringing thereby national and international recognition to the public health laboratory services of the State of Hawaii; now, therefore,

BE IT RESOLVED by the House of Representatives of the First Legislature of the State of Hawaii, General Session of 1961, the Senate concurring, that in behalf of the people of the State of Hawaii we do hereby express our heartfelt recognition and appreciation of Dr. Levine's many years of public service, his devotion to science and his contributions to humanity, and wish him a productive and happy retirement; and

BE IT FURTHER RESOLVED that a certified copy of this Resolution be forwarded to Dr. Levine.

OFFERED BY:

APR 17 1961



The President's Page



A guest editorial in this issue explains certain aspects of the Social Security Amendment Act of 1965 and covers what these changes imply, what a physician will have to pay, and other features.

In a previous personal communication I covered the field generally as we knew it then. At this writing, regulations have still not been issued, and until the Secretary of Health, Education and Welfare submits these regulations numerous questions will remain unanswered.

You should be reminded that: (A) Concerted action, by a medical society or a hospital staff, urging its members to boycott or not participate in implementing P.L. 89-97, subjects that group to possible prosecution under the Sherman Antitrust Act. (B) Individual refusal to participate is a physician's right and prerogative as a free citizen. (C) P.L. 89-97 not only was designed for those 65 and over, but includes the entire package of welfare medicine in one law (see previous communication to you). (D) Physicians are now under Social Security by compulsion (see editorial). (E) Utilization Committees are vitally important and hospital utilization committees under Part 1-A should be composed only of physicians. These committees should be responsible to hospital staff only, even though H.E.W. will require reports from them for statistical reasons. Committee members will probably be paid a fee for their services. The individual physicians will probably be caught in a cross fire between the utilization committees and the patients who will demand their "rights." The families would like, in many instances, to be free of the burden of care as long as possible. (F) Utilization committees under Part 1-B, the voluntary medical insurance portion, should function strictly under the medical society and not the carrier. H.E.W. up to now leaves this to the discretion of the profession. (G) A physician can accept payment on (1) *assignment,* which restricts his fee to what has been found to be "reasonable and customary" (determined by whom? H.E.W. says the carrier and then, contrary to this, says the carrier and the medical society); or the physician can use (2) *direct billing,* but he must so inform the patient and charges must be discussed. It is urged that all physicians use the direct-billing method and in so doing set their usual fair fees for services rendered, with prior consultation with the patient. The physicians will then have to receipt the bill when paid, so that it can be turned over to the fiscal agent for processing.

Not in the Law is the problem of the Civil Rights Act of 1964 and the "Statement of Compliance" pursuant to Title VI of the Civil Rights Act of 1964. In this statement you agree that if you take care of a patient whose care is totally or in part paid with Federal money, you must sign a pledge that you will not discriminate relative to race, color, or national origin. What a slap in the face for Medicine! Physicians practiced without such discrimination long before these bureaucrats ever came upon the national scene. Only certain physicians received this edict from our local Department of Social Services; viz., those who perform certain office procedures on D.S.S. cases.

I am pleased to announce that most physicians chose to take care of these patients without reimbursement rather than sign this ridiculous "pledge." The D.S.S. has refused to compensate physicians who have not signed, but they continue to send patients to them. I note in the last issue of *AMA News* that H.E.W. has said that it is not necessary to sign nondiscrimination "pledges" in order to receive payment for federal or state welfare patients. We shall see whether they will relinquish or cease their demand for this "pledge." It is certain that something will have to be on the forms to comply with the Law, but it might be a simple statement which by some semantic foot work removes the onerous nature of the previous requirement.

It is regretted that the President's Page has to deal with such mundane things, but this is a "gutty" period in which we live and there is little time for philosophy.

Ord Pinkerton

HAWAII MEDICAL JOURNAL

Editorials

Medicare and the Physician's Responsibility

On July 30, 1965, President Johnson signed into law a bill "To provide a hospital insurance program for the aged under the Social Security Act with a supplementary health benefits program and an expanded program of medical assistance, to increase benefits under Old-Age, Survivors, and Disability Insurance System, to improve the Federal-State public assistance programs and for other purposes."

In essence, the extensive and complicated new law provides hospital and nursing-home care, post-hospitalization home health visits, outpatient diagnostic services and psychiatric hospital care for all persons sixty-five-years old and over. In addition, a voluntary insurance program to cover physicians' services for the elderly is included. Both the basic hospital plan and the supplementary medical-insurance plan become effective July 1, 1966.

Other benefits include a 7 per cent increase in Social Security cash payments retroactive to January 1, 1965, and an increase from $1,200 to $1,500 in the amount an elderly person can earn without having his Social Security benefits reduced.

The "Social Security Amendments of 1965" provide also for the mandatory inclusion of self-employed physicians in Social Security. Self-employed physicians will be responsible for the payment of Social Security taxes at the current self-employed rate (5.4 per cent of $4,800), retroactive to January 1, 1965. The $259.20 tax will be due in April, 1966.

To finance the cost of the benefits—estimated, perhaps conservatively, at $6,500,000,000 a year—the bill provides for increased Social Security taxes beginning July 1, 1966. The increased percentage rates will be applied to the first $6,600 of an employee's earnings. The current base is $4,800. This payroll tax is duplicated by the employer.

For example, an employee earning at least $6,600 in 1966 will pay a Social Security tax of $277.20, as compared with $174 in 1965. His employer will match the employee's tax, bringing the total tax to $554.40. Seven step increases have been stipulated through 1987, when such an employee will pay $372.90.

In 1966 self-employed persons earning at least $6,600 will pay a Social Security tax of $405.90, increasing in seven steps through 1987, when the tax will be $514.80.

Because the legislated percentages and the wage base are increased every few years by Congress to finance ever increasing Social Security benefits, it can be anticipated that those percentages or wage base in the new bill will be increased within two years.

In its vigorous opposition to the Social Security financing of hospital benefits, the American Medical Association predicted that if the bill passed efforts would be made to include all persons, regardless of age, and to increase hospital and medical benefits. The complete socialization of medicine would then be but a matter of time.

Such a prediction is not without foundation. Proponents of Medicare have, ever since the demise of the all-inclusive Murray-Wagner-Dingell bill of the 1940's, indicated time and again that the Medicare approach is but the first step.

The fact that, despite strong efforts to the contrary, the services of pathologists, radiologists, anesthesiologists and physiatrists were not included in the "Medicare" portion of the law was a victory of sorts for organized medicine. But more than that, it was a recognition by certain Congressmen that the compulsory inclusion of these physicians' services could in fact be the catalyst to precipitate complete socialization of medicine.

Whether or not the law will be expanded eventually to provide federally financed and controlled hospital and medical services to all persons regardless of age and financial need may depend on how well physicians co-operate in its implementation,

Reprinted by permission from N. England J. Med. 273:447 (Aug. 19) 1965.

for, as the Senate Finance Committee reported, "The physician is the key figure."

And, indeed he is, for he is the sole authority to send an elderly patient to a hospital for federally paid care, to determine the necessary treatment and to order the patient home or to a nursing home. A physician's decision will affect the cost to the Government as well as the cost to the patient because of various "deductibles" written into the law that come out of the patient's pocketbook directly.

Concomitant with the physician's responsibility under the "Medicare" features will be his personal involvement under the voluntary-insurance-coverage provisions of the bill. As a provider of services, he will be faced with the not unfamiliar problem of determining his "reasonable" costs, "prevailing" and "customary" charges and innumerable regulations and decisions arrived at through consultation and arbitration by his representatives in organized medicine with those designated state agencies supervising and administering the plan under the direction of the Secretary of Health, Education, and Welfare.

The implementation of a law so extensive and complicated as Medicare will involve the private physician in a bureaucratic pattern perhaps more complex and frustrating than he has ever seen. The paperwork he now complains about will be inconsequential by comparison. Such is the nature of a bureaucracy, especially one implementing a program costing billions of dollars and affecting millions of people.

To argue that physicians can either make or break the program, however, is toying with what appears to be a self-evident truth. It is equally a self-evident truth that those who administer the program can either make it or break it, the Kerr-Mills bill implementation being a case in point.

Section VI of the A.M.A.'s *Principles of Ethics* states: "A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment or tend to cause a deterioration of the quality of medical care."

Those administering laws and regulations affecting a physician's practice should accept this principle, understand it and respect it—not as a concession to a reluctant participant in a federal program but because it is right and just and in the best interest of the patient, for whom the law was designed and to whom the physician is dedicated.

Medicare: What to Do About It

An employer engages a physician to treat his employee—and pays him.

A government engages a physician to treat its soldiers—and pays him.

A group of doctors engages a physician to treat its clients—and pays him.

A retirement home engages a physician to treat its residents—and pays him.

A government proposes now to engage physicians to treat most of its citizens who are over 65—and pay them.

It reminds one of a verse from the Rubaiyat—

> Myself when young did eagerly frequent
> Doctor and Saint, and heard great argument
> About it and about; but evermore
> Came out at that same door wherein I went.

The issue was really settled decades ago, when physicians first took care of Workmen's Compensation cases. We have been on the downhill road to socialized medicine ever since.

But the pace is quickening; the hill is steeper, and the brakes are failing. What can we do?

Dr. Reppun has a positive plan, one which is being actively promoted by the officers of the Honolulu County Medical Society: to get our Foundation for Medical Care on the road and, in conjunction with several mainland Foundations, implement Medicare through these organizations. Be sure to read Dr. Reppun's column, on page 165.

Season's Greeting

&

Our Sincere Best Wishes For 1966

The Bureau of Medical Economics Ltd.
510 South Beretania St.
Honolulu, Hawaii 96813

HAWAII MEDICAL JOURNAL

This Is What's New!

• **Petrol sniffing,** an English counterpart to glue sniffing, has recently been reported. An unhappy, shy, sensitive 14-year-old lad, who was doing poorly in school, found that he became less nervy and edgy when filling the school lawn mower with gasoline. He soon found it more convenient to carry the petrol in a petrol lighter with him, sniffing the fumes as needed. One evening, after sniffing the petrol fumes, he began to see foxes all about him. His confused, **hallucinating behavior** brought to light the petrol sniffing. The psychotic symptoms abruptly cleared when he discontinued the petrol. (*British Med. J.* [July 31] 1965.)

• The hope that **angiotension infusion** tests might identify patients with **renovascular hypertension** seems to be fading. After using angiotensin infusions in forty patients with hypertension, the authors concluded that the angiotensin test is of **no value** in predicting hypertensive patients who have their hypertension on a renovascular basis. (*Lancet* [July 31] 1965.)

• **Twenty-four psychotic Danes** and 9 nonpsychotic staff members made a 9-day **tour of Australia.** Most of the patients were schizophrenics. All of the patients derived benefits from the trip to Austria, even though their behavior on several occasions attracted the attention of the Austrian villagers. On return to Denmark, they were **more alert** and **more acceptable** socially. (*Nord Med.* [June 10] 1965.)

• **Primary deep vein thrombosis** of the arm usually follows strenuous arm **exercise** and results in the diagnostic signs of **swelling** of the extremity, **axillary tenderness,** and **dilated superficial veins** over the upper arm and shoulders. The thrombosis usually starts in the subclavian vein at the first rib level. Twenty-three of the twenty-five patients were treated conservatively with **rest and elevation** and recovered from the acute symptoms. Slightly over half had residual swelling, pain and easy fatigability. (*Arch. Surg.* [July] 1965.)

• Patients with implanted **cardiac pacemakers** can be thrown into ventricular fibrillation by coming too close to physiotherapy short wave **diathermy machines** or surgical diathermy equipment. (*Brit. Med. J.* [June 12] 1965.)

• The **pattern of rheumatic fever** has undergone a **profound change** in both North America and Europe over the past few decades. Even at the medical centers, it is becoming increasingly difficult to find cases of Sydenham's chorea and subcutaneous nodules to demonstrate to medical students. Thus far, research on the problem has turned up many interesting facts, some practical information, but few major truths. A few of the facts:

The **virulence** of type A beta-hemolytic streptococci is due to the type-specific M protein **surface antigen** and the **hyaluronic acid capsule.** Both of these substances protect the streptococci from phagocytosis.

Approximately **40 per cent** of school children will have **group A streptococci** in their **throats** during the school year.

Although the rheumatic fever attack rate in **military streptococcal epidemics** exceeds **three per cent,** the attack rate in **civilian** population is considerably less than this.

There appears to be a difference in the attack rate between streptococcal sore throats associated with **exudative pharyngitis** and similar strep throat associated with **nonexudative** pharyngitis. In Chicago one thousand youngsters with nonexudative group A streptococcal sore throats were treated with nothing. None of them developed rheumatic fever.

Practical conclusions: the single most important **laboratory aid** in managing a sore throat is the **throat culture.** If the culture is positive for group A beta-hemolytic streptococci and the patient has an exudative pharyngitis, **penicillin** (unless the patient is sensitive) should be given. If the culture is positive and the patient has a nonexudative pharyngitis, penicillin should probably be given. If the **culture is negative** (unless there is evidence of some rare condition such as diphtheria) **penicillin as well as other antibiotics should be withheld.** (*Modern Concepts of Cardiovascular Disease* [Oct.] 1965.)

• Of 31 patients with a **gunshot wound of the heart** who arrived at a Houston Emergency Room over a 12-year period, **20 survived. Pericardial aspiration** seemed to be the single most important procedure related to survival. (*Surgery* [June] 1965.) ■

F. I. Gilbert, Jr., M.D.

In Memoriam – Doctors of Hawaii

This is the fifty-eighth installment of In Memoriam—Doctors of Hawaii.

Tokue Takahashi

Tokue Takahashi was born on November 22, 1885, in Ibaragi Prefecture, Japan. He was the son of Dr. Shusai and Tatsuta Takahashi.

He was granted his M.D. degree in 1910 from the Tokyo Imperial University Medical School. Between 1912 and 1914 he did postgraduate study in surgery with Dr. Kondo at the same university. In March, 1913, Dr. Takahashi went to Mexico University on invitation but returned to Japan in 1914, via the United States, because of the Mexican Revolution. In 1915 he went to China as Professor of Surgery at Koshu Public Medical School. From 1917 to 1918 he studied at Tokyo University in the communicable disease department.

Dr. Takahashi came to Hawaii in February of 1919, and began his practice on Alakea Street. He passed the examinations of the Territorial Medical Board in the same year. Later he moved his office to Vineyard Street, where he remained until 1927.

Dr. Takahashi went abroad to Cambridge University, England, in 1927 and did special work at the Cavendish Laboratories. From 1928 to 1930 he studied at the Middlesex Hospital, London.

Returning to Honolulu in 1930, he remained until 1941. While in Honolulu, he was at one time Chairman of the Japanese Hospital. He was also a member of the Honolulu County Medical Society.

Dr. Takahashi and Miss Yukiko Ishizuka were married in 1913 in Tokyo. They had five children: Ichiro, Mariko, George, Hideo, and Fumíko. Hideo planned to serve his internship at Kuakini Hospital starting July, 1956, after he finished medical school in Japan.

Dr. Takahashi's special interests were philosophy and music. He was also fond of sailing.

He died on September 5, 1951, in Tokyo, Japan, at the age of 65.

Charles Ola Hansen

Charles Ola Hansen, born in 1866, was granted a medical degree from Bennett Medical College, Chicago, in 1898.

In 1920 Dr. Hansen was in practice at Haiku, Maui. The following year he moved to Manila and in 1923 was practicing at Baguio, Philippine Islands. By 1931 he had returned to the United States and was in practice at Altadena, California, where he remained until his retirement in 1938.

Dr. Hansen died at Long Beach, California, on October 8, 1953, aged 86. He was a veteran of World War I.

George Lincoln Broadrup

George Lincoln Broadrup was born September 29, 1863, in Frederick County, Maryland. He was the son of Cornelius A. and Sophia Broadrup.



DR. BROADRUP

He was graduated from the College of Physicians and Surgeons of Baltimore in 1891.

Dr. Broadrup was surgeon for the B. & O. Railroad for many years and for the N. & G. Taylor Tin Mills, and the U. S. Rail Co. in Maryland.

He was also promoter, director, and lecturer of the Allegheny Hospital in Cumberland, Maryland.

From 1900 to 1908 Dr. Broadrup was a member of the City Council of Cumberland.

Coming to Hawaii in 1918, he was on the staff at The Queen's Hospital and from there went to Maui as government and plantation physician for the Hawaiian Agricultural Co. and the Hutchinson Sugar Plantation Co. In 1920 Dr. Broadrup moved to Pepeekeo, Hawaii. From 1921 to 1926 the doctor was located at Pahala, Hawaii, moving to Hilo in 1927. Sometime about 1928 he left the Islands.

On his return to the mainland, Dr. Broadrup settled in Lancaster, Pennsylvania, where he practiced until he retired.

Dr. Broadrup died April 28, 1937, at Lancaster at the age of 73.

He was a Mason, Knight of Pythias, Odd Fellow, and a member of the Allegheny Medical Society (serving a term as President), Cumberland Academy of Medicine, Hawaii Territorial Medical Association, and the American Medical Association.

Hawaii Academy of General Practice

- - - WHITHER THE PRACTICE OF MEDICINE?

MEDICARE is now Public Law 89-97. Dr. Appel, President of the AMA, interpreted it as a mandate for physicians to serve the elderly under its provisions. The official opinion of the AMA is that this is not so, that physicians need not participate.

Few physicians realize how much they may become involved under part 1-A, the hospitalization part of Medicare that is to be an automatic benefit to all over 65. Perhaps Dr. Appel had this in mind when he made his much-criticized statement about "Doctors must now obey the law." No eligible person will be admitted to an eligible hospital, etc., without a physician's signature on a form. That governmental form may well be designed to be as detailed and odious as any in the past, and it may require the attending to swear that he is not a Communist, and that he does not discriminate on account of, etc.

If your over-65 patient breaks a hip, he has the right, under the Law, to the hospitalization provided. Even if he did not buy part 1-B, he may still ask you to care for him in the government-sanctioned hospital, in which case you will have to fill out government forms even though you donate your services. Since he is to get so much of the cost of care paid for him, you may well be more inclined to charge him your usual fee.

- - - NONPARTICIPATION?

For some of us who feel deeply that we should fill out no government forms and accept no Federal monies, the road ahead is not that simple and clear.

Would we be cold hearted enough to refuse to sign admission forms to get our regular and faithful older patients into this program, to the benefits of which they will become entitled by Law under part 1-A? Would we be able to forsake them by turning them over to the tender mercies of those physicians who have no compunction about accepting the Federal dollar—if, by refusing to sign Federal forms, we must needs step out of the picture?

If most of us in this country suddenly awaken to a realization of being in a brakeless cart on a runaway downhill course to complete socialism; if we doctors, in unity, were to refuse to sign government forms or accept Federal payments under Medicare, what might the outcome be?

- - - DO WE HAVE ANY CHOICE?

In the first place, never would we doctors be of a single mind; there will inevitably be many physicians and groups who would be only too anxious and willing to take over from us.

In the second place, "nonparticipation" as an action in concert, would without doubt play into the hands of the American Hospital Association. The hospitals and their affiliated medical schools would find it easy, aided and abetted by the government, to take up the full practice of medicine in all its specialties. The President's pet program for the cure of Heart Disease, Cancer, and Stroke would fit beautifully into this projection.

Finally, by carrying our foresight a step further, it is a natural sequitur that the specialists will all be practicing in hospitals, while the outlying dispensaries will be just that, with general practitioners in attendance as first aid men!

- - - SO, WHAT'S TO DO?

We physicians have no choice other than to stick together, generalists and specialists both. We must —as a profession whose freedom, nay, whose very existence, is at stake—promote, in fact, insist on Foundation-for-Medical-Care type of implementation of Public Law 89-97, Part 1-A. Under no other mechanism can we call the shots, insofar as our freedom to practice medicine for the patient's benefit is concerned. Under no other medical care plan can we be assured of freedom from third party restrictions on either the practice, or the economics, of medicine in the United States. No nationalized or socialized health care program in the world has been able to effect the high standards of medical practice broadly available to nearly all of the millions of people in this country. ■

J. I. FREDERICK REPPUN, M.D.
Secretary

HAWAII MEDICAL JOURNAL

New Members



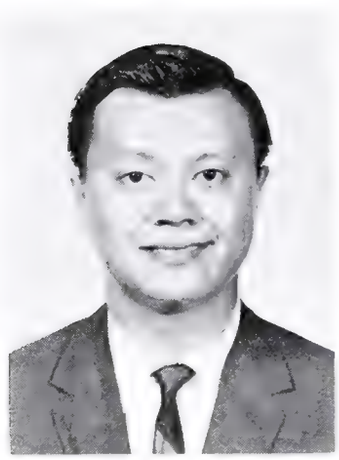
E. Lee Simmons, M.D.
888 South King Street
Honolulu, Hawaii 96813
UROLOGY
University of California School of Medicine—1956
Internship—The Pennsylvania Hospital—1956-57
Residency—University of California Medical Center—
1957-58, 1960-61, 1961-64



Robert H. Oishi, M.D.
1010 South King Street, Room 101
Honolulu, Hawaii 96814
GENERAL SURGERY
Tufts University School of Medicine—1958
Internship—St. Elizabeth's Hospital—Boston
Residency—St. Elizabeth's Hospital—Boston



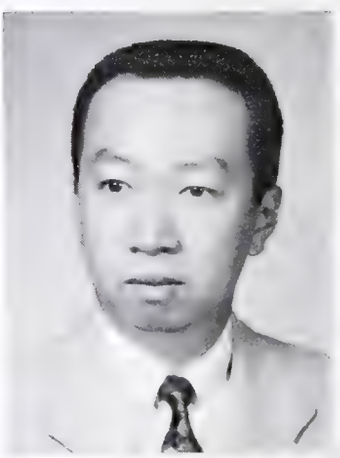
Edwin R. Curphey, M.D.
1697 Ala Moana Blvd.
Honolulu, Hawaii 96815
DERMATOLOGY
University of Ottawa Medical School—1954
Internship—Ottawa General Hospital—1953-54
Residency—Montreal Jewish General Hospital—1958-59
Long Beach V. A. Hospital—1959-62



Albert C. K. Chun-Hoon, M.D.
1441 Kapiolani Blvd., Room 707
Honolulu, Hawaii 96814
ORTHOPEDICS
Yale University—1957
Internship—Philadelphia General Hospital
Residency—Baylor University Affiliated Hospitals
Texas Medical Center



Edward B. Payne, M.D.
P. O. Box 3378
Honolulu, Hawaii 96801
ORTHOPEDICS—
PUBLIC HEALTH
Northwestern University—1933
Internship—Sacred Heart Hospital—Spokane, Wash.—1933-34
Residency—Rhode Island Hospital—Providence, R. I.—1945-47
New York Reconstruction Hospital—1951-52



Livingston M. F. Wong, M.D.
250 Alexander Young Bldg.
Honolulu, Hawaii 96813
SURGERY
University of Oregon Medical School—1959
Internship—Good Samaritan Hospital, Portland, Oregon
Residency—Boston City Hospital, Boston, Mass.
Mass. General Hospital, Boston, Mass.



Catalino C. Cachero, M.D.
1834 Nuuanu Avenue
Honolulu, Hawaii 96817
GENERAL PRACTICE
University of Santo Tomas—1956
Internship—St. Francis Hospital
Residency—St. Francis Hospital



Donald Alan Peck, M.D.
1441 Kapiolani Blvd., Suite 606
Honolulu, Hawaii 96814
SURGERY
New York Medical College—1956
Internship—U. S. Naval Hospital,
Camp Pendleton—1956-57
Residency—Mayo Foundation,
Rochester, Minnesota—1959-63
VA Hospital, Pittsburgh, Pa.—
1963-65



F. E. Popoff, M.D.
1531 S. Beretania Street, Room 204
Honolulu, Hawaii 96814
PSYCHIATRY
Amsterdam University—1956,
Arts Degree—1958
Internship—Mt. Sinai Hospital—
Miami Beach
Residency—Mt. Sinai Hospital—
Chicago



George Kenessey, M.D.
91-843 Ft. Weaver Road
Ewa Beach, Hawaii 96706
GENERAL PRACTICE
University of Rochester School of
Medicine—1961
Internship—University of Utah
Affiliated Hospital
Residency—The Queen's Hospital



Young K. Paik, M.D.
St. Francis Hospital Laboratory
2260 Liliha Street
Honolulu, Hawaii 96817
PATHOLOGY
College of Medicine, Seoul National
University—1956
Internship—St. Francis Hospital
Residency—St. Francis Hospital



Shigemi Sugiki, M.D.
888 South King Street
Honolulu, Hawaii 96813
OPHTHALMOLOGY
Washington University—1961
Internship—St. Luke's Hospital—
St. Louis, Mo.—1961-62
Residency—Barnes Hospital—
St. Louis, Mo.—1962-63
V. A. Hospital—St. Louis, Mo.—
1963-65



Michael F. Hase, M.D.
823 California Avenue
Wahiawa, Hawaii 96786
GENERAL PRACTICE
University of Florida—1964
Internship—Kuakini Hospital—
1964-65

Book Reviews

★The Practitioner's Illustrated Dermatology

By Howard T. Behrman, M.D., with the collaboration of Theodore A. Labow, M.D., 189 pp., $9.75, Grune & Stratton, 1965.

THIS IS AN ELEGANT book. The authors have contributed a unique addition to the dermatologic literature. The book illustrates beautifully and describes briefly the clinical picture and diagnosis and treatment of the common skin disorders. It is essentially a color atlas of dermatology for the practitioner, with all of the needed information to manage ordinary uncomplicated skin conditions.

In contrast to many texts, the illustrations in general represent quite typical examples of skin conditions as usually seen—not the unusual and bizarre. With few exceptions the color plates are sufficiently good that a physician could look at the lesion, open the book, and be reasonably certain of the diagnosis.

The section on treatment gives the trade names of the common medications used in dermatology. While a few formulas are given that call for prescription writing, most medications are of such a nature they can be prescribed by name.

The book is attractive, the indexing excellent, the format readily followed, and the printing clear. It has been well edited.

In a book of such excellence and so chary of words there is only one place where I would suggest a change—The authors have stated "As with many non-specific dermatoses, relaxation and an escape to a warm, sunny climate are often beneficial." It would have been more in harmony with the book to have said ". . . escape to Hawaii."

SAMUEL D. ALLISON, M.D.

Pathology for the Physician, 7th Ed.

By William Boyd, M.D., Dipl. Psychiat., M.R.C.P. (Edin.), Hon. (F.R.C.P.) (Edin.), F.R.C.P. (Lond.), F.R.C.P. (Can.), F.R.S. (Can.), LL.D. (Sask.) (Queen's), D.Sc. (Man.), M.D. (Oslo), 1022 pp., $12.50, Lea & Febiger, 1965.

THE SEVENTH EDITION of this well-known text is again directed towards the practicing clinician and is not written for the pathologist or the undergraduate student. The discussion of any one subject is brief and there is a great deal of emphasis on the natural history of disease. The content of the new edition has been revised in an attempt to reflect the changes in the relative importance of the diseases seen in modern North America. For example, myocardial infarction, the neoplastic diseases, syphilis, and typhoid have been put in proper perspective. The coverage of some of the new common late stages of the chronic diseases such as diabetes mellitus has been expanded. The section on pulmonary tuberculosis has been completely re-written to include a discussion of the effects of long-term care with modern antituberculosis therapy. New sections have been included covering recent work on the pineal and thymus glands and some of the newly described entities such as heavy chain disease and ataxia telangiectasia.

The book reads easily. The print is large and there are numerous photographs and helpful diagrammatic illustrations. Technically, some of the photomicrographs, x-ray reproductions, and color plates could be improved.

RICHARD R. KELLEY, M.D.

★ means highly recommended.

★The Visual Fields, 2d Ed. A Textbook and Atlas of Clinical Perimetry

By David O. Harrington, A.B., M.D., F.A.C.S., 386 pp., $16.00, The C. V. Mosby Company, 1964.

OPHTHALMOLOGISTS and neuro-ophthalmologists are fortunate in having Dr. Harrington produce a second edition of his classical text on visual fields. This new textbook pays more attention to the quantitative analysis of many types of field deficiencies, and includes the latest perimetric techniques, in particular the extremely valuable technique of quantitative luminescent methods.

For the first time a consideration of the approach to pediatric perimetry, heretofore considered unfeasible, has been skillfully dealt with.

The revision of the chapter on glaucomatous field changes makes this new text a "must" for ophthalmologists who see much of it.

No ophthalmologist can afford to be without this extremely well written, well documented and illustrated textbook on Perimetry.

PHILIP M. CORBOY, M.D.

★Respiratory Function in Disease

By David V. Bates, M.D., (Cantab.), M.R.C.P. (London), and Ronald V. Christie, M.D. (Edinburgh) M.Sc. (McGill) D.Sc. (London) Sc.D. (Dublin), F.A.C.P., F.R.C.P. (London) F.R.C.P. (C), 566 pp., $15.50, W. B. Saunders Company, 1964.

THIS EXCELLENT TEXT by two foremost workers in the field is easy reading. Despite its title, normal respiratory function is covered and related to disease states. In a field where illustrative material is so important, an adequate number of tables, graphs, and illustrations are presented. The reproductions of x-rays are more than satisfactory. Of special interest is a list of 2,358 references, which is more a bibliography than a mere table of references. This is a volume which deserves to be in all libraries, complementing the already accepted text by Dr. Comroe.

BERNARD YIM, M.D.

Tracy's the Doctor as a Witness, 2d Ed.

By William J. Curran, LL.M., S.M. Hyg., 196 pp., $5.75, W. B. Saunders Company, 1965.

THIS IS A BOOK of interesting forays into the problems of evidence as it comes from the testimony of an expert witness. It is of more practical value to a lawyer than to a doctor. It would be as bewildering to the average doctor as would be a treatise on bacterial and mycotic infections to the average lawyer.

THOMAS M. WADDOUPS, A.B., LL.B.

Office Gynecology, 8th Ed.

By J. P. Greenhill, B.S., M.D., F.A.C.S., F.I.C.S.(Hon.), F.A.C.O.G., 512 pp., $11.00, Year Book Medical Publishers, 1965.

AS WITH ITS PREDECESSORS, this edition is a worthy addition to any collection of guidelines for office practice. The section on endocrinology has been enlarged, and should prove useful in office management of the endocrinopathies.

As with all publications, one may take issue with some

continued page 182

HAWAII MEDICAL JOURNAL

Notes and News

Professional Moves

We welcome back the **Braults** who were away at the University of Alberta Hospital for the past two years. **Anna Maria,** internist, and **Roger,** general surgeon, are locating at 539 Kailua Road as a husband-wife team. Anna Maria was briefly with the Straub Clinic while Roger did his surgical residency at Queen's. We notice two new orthopods at 1441 Kapiolani Blvd.; **Lawrence Gordon** is in Suite 520 and **Albert Chun-Hoon** in Suite 707. They arrived a trifle late for the skateboard mania, but there are still plenty of strained backs and ruptured discs to go around. Nostalgia for home seems to have prompted ex-Californian **Teru Togasaki** to close shop and return to California to practice with one of her M.D. sisters. Restless **Jack Ikeda,** internist, has moved to new quarters at 2065 S. King St.; he plans to stay put, for a while at least. **Jorge Froilan,** oto*rhino*laryngologist, has located at 1697 Ala Moana Blvd. The extra "rhino" makes a mouthful.

We were invited to the open house at the Leeward Medical Clinic on Sunday, October 10, where **Joe Nishimoto** and **Yoshi Takagi** will serve the community full time and OB men **George Goto** and **Bunzo Nakagawa,** radiologist **Phil Lee,** surgeon **Yutaka Yoshida,** ENT man **Hideo Oshiro,** bone man **Norman Nakamura,** skin man **Ed Emura,** and pathologist **Y. Takenaka** will maintain offices and lab facilities.

Dick Kennedy, Straub Clinic business manager, announced that a committee has been formed to look into the possibility of a Clinic hospital. The chief problem appears to be funds, since the Clinic has just spent over one million dollars for their new seven-story addition. Speaking of funds, proposals were rife for a four-year medical school in **Windsor Cutting's** absence. Senator Inouye made a bid for a Pacific Medical Center and **James Shannon,** NIH director, wanted a four-year medical school instead of the projected two-year school. Even Henry Kaiser got into the act by dedicating his Kaiser Foundation Hospital to this endeavor. Alas, when Windsor returned from his two-week Japan trip, all he could say was, "The proposal for a four-year medical school for Hawaii was the first thing that hit me this morning. . . . I am in the dark about that. . . . So far as I know, it's still a two-year medical school we're having." He felt that the only way Hawaii can afford a four-year school would be "if" the Federal Governmnet underwrites the entire cost. We are glad to see that in this age of free fall, we still have a few practical visionaries with both feet on terra firma. We recall an ancient Oriental proverb that says, "Even a 100-mile journey starts with the first step."

Elected, Appointed, and Honored

We congratulate **Hing Biu Luke** and **Frederick Dodge** of Oahu and **Kenneth Haling** and **Katsuyuki Izumi** of Maui for their election to active membership in the American Academy of General Practice. This outstanding society requires members to complete 150 hours of postgraduate study every three years. The ambitious medical staff of the Kona Hospital elected **Chisato Hayashi** to organize its members so that the hospital can meet requirements for accreditation. The newly formed Hawaii Chapter of the Arthritis Foundation elected **Don Poulson,** vice president, **Arthur Wong,** chairman of its Medical and Scientific Committee, and **Norman Nakamura,** board member. Its initial program will stress public education on quack remedies for arthritis. We wonder if aspirin will be condoned in the future.

The Cancer Society elected **Robert Rigler** Executive Committee Chairman and **Reginald Ho** new board member. **John Lowrey** was installing officer. Outgoing president is the outgoing personality, **Grover H. Batten.** The Honolulu Community Theatre presented **John Hanley** with a "Volunteer of the Year" award for his contribution to the community theatre. Civic leader, **Fred Lam,** was asked to be one of the spaders at the ground-breaking ceremony for the new chapel at Chaminade College for his role in fund-raising activities.

Newly-elected Fellows of the American College of Surgeons include **Roy I. Iritani, Richard T. Mamiya,** and **Francis T. Oda.**

Visiting Physicians

Good ol' **Henry Kempe,** articulate visiting professor at Children's Hospital for the summer, took yet another parting shot at routine smallpox vaccinations before leaving. In a talk to the Tripler staff, he pointed out that in the United States, nobody dies from smallpox anymore, but at least ten children die every year from smallpox vaccinations. "This country hasn't had a smallpox case since 1947, but 14,000,000 persons, most of them babies, are being immunized against the disease each year. As a result, one out of every 100,000 who get vaccinated will get encephalitis or a related disease." We wonder what he will be crusading against, next visit here.

The Seventh Western Divisional Meeting of the American Psychiatric Association was held at the Princess Kaiulani Hotel. They analyzed the student uprisings at the University of California in Berkeley and the recent riots in Watts, California. They talked about school phobia as being related to too-early separation from the mother and the passive family role of the father. They mentioned a "seduction" factor in drug addiction and someone from the National Council of Alcoholism noted that "there is no evidence alcoholism is inherited, but it could be considered contagious." An interesting thought. . . . Perhaps we can recommend increasing the alcoholic percentage of liquor so it will be self-sterilizing and less contagious.

About twenty-five doctors from Japan and an equal number from the U.S. met at the East-West Center October 4 through 7 to exchange research information on tuberculosis, Hansen's disease, cholera, virus, parasitic and nutritional diseases. They later met a few hand-picked local physicians for a Washington Place reception.

Health Fair

We watched sympathetically as the hard-working crew of **John Stephenson, Bill Dodge,** and **Lee McCaslin** gnashed their teeth and chewed their nails as the anticipated publicity for the Fair failed to materialize and our ever-sympathetic *Star-Bulletin* editor came out with a satiric editorial about the Fair. To everyone's pleasant surprise, however, the HIC pavilion was packed solid from opening day and people queued patiently for their free tests especially at the EKG and glaucoma booths.

Ed Boone ran his Civil Defense emergency hospital with quiet efficiency. Somehow he managed to mobilize enough participants for his surgical teams by showtimes and the Windward Theatre Guild members added such realism with their acting and make-up that we even wor-

ried about some of the cases. A head injury child remained so quiet during the demonstration we finally tried to bring her out of her feigned shock. We could hear triage officer **Ed Lum** over the loudspeaker recommending "Cutty Sark for this patient . . ." as he examined a hysteria case.

Bob Nordyke looked a bit weary after two days of Achilles tendon reflexes (he estimated over 2,000 taps at the last head count). Medical historians **Rogers Hill** and **Charley Judd** tended their private booth on the history of surgical instruments. Weary internists **Jack Ikeda** on Saturday and **Charley Ching** on Sunday night still had long-waiting lines at their EKG booths at closing times. We watched **Dan Palmer, Richard Dang,** and **Bob Kim** tear down the dermatology exhibit at exactly 9:00 P.M. Sunday, with crowbars and hammers swinging.

Even the *Star-Bulletin* admitted the success of the Health Fair with a small news item about the record attendance of over 50,000 for the two days. It was a triumph for John Stephenson and the staff!

Health Department

Eloquent **Wilbur Lummis,** crusading executive officer of the Medical Service Division, warned Central Union senior citizens to beware of "con men" posing as Medicare representatives. The elderly are particularly susceptible to quackery, it seems. Likeable Deputy Director **Walter Quisenberry** is filling in also as Executive Officer of the Mental Health Division while **Audrey Mertz** is on maternity leave. This bit of information gives us a cue to make a monosyllabic but eloquent comment about pregnancy among our staff members, whether they are receptionists, nurses, med techs, or even doctors. . . . Ach!! **R. B. Berry,** Health Department epidemiologist (we often wonder about initials instead of first names), reminded parents that infants receiving 3-in-1 Sabin vaccine as prescribed have permanent immunity against the disease. R.B. reports that Hawaii hasn't had a case of polio since 1961 and encourages children who didn't get Type III to obtain either that or the trivalent variety. R.B. aims to maintain Hawaii's "herd protection" against preventable communicable diseases. "Herd protection," for the uninformed, has nothing to do with cattle, but is medical jargon used to describe a population that has so many people protected that the few who are not immunized are still relatively safe.

The Valley Isle is being invaded by rats and mice. It seems that the mice are streaming across highways day and night; shocked hotel guests find them in their beds. And cats on the island have grown so fat with their diet that they don't eat them any more. Pied Piper **F. H. Tong,** District Health Officer, announced that a crew of five will begin eradication work in the infested Kihei area. Said F.H., "We are grateful to the County Fathers for their offer of financial assistance, which we are accepting in the same appreciative spirit as we have expressed in the past for the generous funds furnished us et cetera, et cetera. . . ." No violins?

Sportsmen

Hunters: In late September, fearless hunter **James Nishi** with his trusty 270 Winchester stalked the wilds of Lanai. A fine buck darted into view. Expert marksman Nishi aimed at the head and fired. . . . The poor animal staggered into the bushes wounded on the hind end. Triumphant hunter Nishi pursued the animal till he could see its legs showing through the brush. Methodical hunter Nishi took careful aim at the elusive head and fired. . . . The legs still stood. . . . Hunter and hunted waited alike. . . . Time passed. Intrepid hunter Nishi stealthily approached the brush with ready rifle and bated breath, only to find a very dead buck shot through the neck and lying upended, legs still showing through the brush. Our hunter is presently undergoing a thorough ophthalmological examination.

Fishermen: Ardent fishermen **Warren Wong** and **Carl Lum** are skindiving off Haleiwa, where Warren has a weekend home. **David Bassett** and clan are skindiving off the YWCA Beach Club for edible seaweed. Miyo has learned to prepare a palatable dish with vinegar. Dave plans to study the effects of seaweed on serum cholesterol and triglyceride levels. **Frank Hatlelid** was a sure winner in the Waialua Boat Club contest with a 203½ pound marlin caught off Haleiwa on his "Malia II." **Dick Sakimoto** and his fishing partners on the "Kamome" hauled in 20 aku, 14 mahimahi, and many opakapaka and ulua, using only spinning gear, during a recent overnight excursion to the Penguin Banks.

Polo: **Masato Hasegawa** and the Tongg Ranchers beat Sunset Ranchers 11 to 9 in a command performance for visiting Japanese royalty, Prince Mikasa and party. Following the game he was introduced to the Prince and, in accordance with strict protocol, did a very formal Japanese bow (which he learned in his early childhood at language school in Hilo) and was aghast when the Prince extended his hand for a handshake. "Aren't you tired?" the Prince inquired. . . . Masato grudgingly admitted, "Yes, but I'm used to it." . . . That's *yamatodamashii* (or Samurai spirit) for you.

Golfers: In September, **Douglas Murray** won A flight individual stableford honors with 42 points at OCC while steady player **Bob Johnston** was in fourth place with one up, in match play vs. par. At the Waialae, **Mac Mitsuda** scored 79-8-71 to win low net honors in A flight. **Toots Fujii** and partner, **Duke Choy** and partner, and another team were in a three-way tie for first place in a team medal tourney.

At the Ala Wai, precision player **Hideo Oshiro** advanced to the finals in the presidential trophy tourney. Gracious **Frank Fukunaga,** last year's winner, eliminated himself in the semifinals. Hard-hitting **Bob Oishi** was nominated to take **Richard Kainuma's** vacancy. **Dick Omura** is the new President of the Thursday Club. He promises to lower all handicaps except his own. We are not certain at this time whether or not he will allow erstwhile handicap chairman **Paul Tamura** to continue.

At the Mid-Pac Country Club's Mr. and Mrs. Golf tournament, the **Walter Ozawas,** with a net 64, were in third place. **Harold Kushi** of Maui was one of the fourteen golfers from Hawaii competing in the pro-amateur division of the $111,111 Sahara Invitational golf tournament. We feel that Harold would probably fare better at the gaming tables.

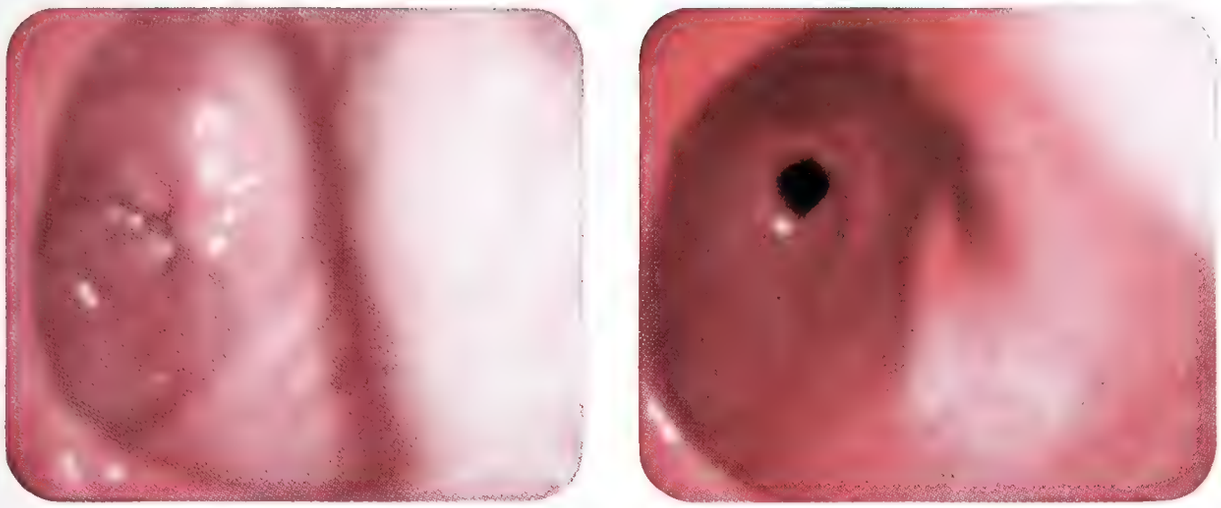
Yachting: **Yosh Ushiyama** won class B honors in a La Mariana Sailing Club program at Keehi Lagoon. **Les Vasconcellos** was in 6th place with the 210's in the Waikiki Yacht Club's 10-mile fall regatta. There were only six entries, however.

Members Speak Up

We thank former British physician, **John Watson,** for enlightening us on the pitfalls of socialized medicine. After a return visit to England this summer, he observed that "unless marked changes are made immediately in the National Health Service, the collapse of the English system of socialized medicine is inevitable." His observations were based on the critical shortage of doctors in England where 25 per cent of graduates from British medical schools leave for better opportunities in Canada, Australia, or the U.S. This results in sheer overwork of the general practitioner. He also commented on the resurgence of private practice with prepaid insurance.

Our inimitable editor, **Harry Arnold, Jr.,** has been crusading against the unreasonable slowness of surface mail. He wrote to the Postmaster General in May about the deplorable situation. When San Francisco postal officials informed him that it would *normally* take from two to three days to reach San Francisco and about two

continued page 176



Intragastric photography studies[1]

A/ E. B., male, age 48. Normal antral contraction. Pyloric opening is not seen. It is difficult to differentiate a deep prepyloric contraction from a "pyloric fleurette" or true pylorus.

B/ Same subject after 6 mg. of propantheline bromide intravenously; antral contractions ceased. The pyloric orifice remained open and was easily identified. Better visualization of the antrum was also obtained.

Now you can see Pro-Banthine® at work
(propantheline bromide)

Pro-Banthine is so effective in anticholinergic action that it may be employed in visualizing the entire pyloric region.

In addition to the intragastric photographs, cinegastroscopic studies[2] have demonstrated graphically not only its effectiveness but the superiority of Pro-Banthine over belladonna alkaloids.

Pro-Banthine produced complete cessation of gastric, antral and pyloric motor activity with a dose of 6 mg. intravenously. This is approximately one-third the usual oral dose of 15 mg.

Atropine at full normal dosages did not produce such cessation. It required double the usual oral dose of atropine, 0.8 mg. intravenously, to duplicate the aperistaltic action of Pro-Banthine. This dose of atropine produced pronounced discomfort and tachycardia with ventricular rates as high as 150 per minute.

It is this pharmacologic superiority of Pro-Banthine which has made it the most widely prescribed anticholinergic in such conditions as peptic ulcer, functional hypermotility, irritable colon, pylorospasm and biliary dyskinesia.

Dosage—The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15 mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

Side Effects and Contraindications—Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. The drug is contraindicated in patients with glaucoma or severe cardiac disease.

1. Barowsky, H.; Greene, L., and Bennett, R.: Investigators' Clinical Report. Photographs courtesy of Drs. H. Barowsky, L. Greene and R. Bennett.

2. Barowsky, H.; Greene, L., and Paulo, D.: Paper read at Meeting of American Society for Gastrointestinal Endoscopy, Montreal, Canada, May 25-27, 1965.

SEARLE

Research in the Service of Medicine

HAWAII TECHNOLOGISTS' BULLETIN

Official Publication of the Hawaii Society of Medical Technologists

Editor: STELLA YOSHIDA, U. S. Army Tripler Hospital

The President's Prerogative

This is the month in which we had planned to discuss a couple of serious problems facing technologists, but the holiday spirit prevails and we'll succumb happily.

In keeping with Christmas custom, we herewith publish part of the gift list we've sent to Santa Claus. This is what we want for Christmas:

1. A box of HSMT's fund-raising candy in every home in Hawaii this Christmas.
2. A tripling of HSMT's membership by next May.
3. An ASCP arm patch or pin or an ASMT pin in the appropriate place on the uniform of every working technologist.
4. The use of the designation "medical technologist," every time we talk about ourselves. If we persevere, it's possible that even physicians will stop using "laboratory technician" and "medical technologist" interchangeably.
5. A minimum of four nominees for every office in HSMT to wage heated campaigns for election next May.
6. Last, and best, we'd like to wish everyone happy holidays. We hope that your Christmas is merry and that its gift of peace and good will among men lasts throughout the new year and makes it a truly happy one.

Case Report: Immunology

A brief summary of laboratory findings in a "case" of multiple irregular antibodies:

The patient was a 21-year-old Group O, Rh negative Caucasian female, gravida III, para II. Her blood was first studied in May, 1965, as part of the prenatal routine.

She had been transfused with approximately eight units of blood one year earlier. No transfusion reactions or neonatal hemolytic disease of her other children were known to have occurred.

Further cell typing showed the patient to be S-, s+, K-, and Fy(a-). Her husband was Group B, Rh positive (DccEe), S+, s+, K-, and Fy(a+). The patient's serum contained four irregular antibodies: anti-D, anti-K, anti-S and anti-Fy^a. Her anti-D titer was never recorded above "Undiluted Only."

The antibodies were identified by using a commercial cell panel augmented by cells from members of the laboratory staff. Saline, ficin, albumin, and the indirect Coombs on each of these were the technics employed. Two simple absorptions were required. Two mainland laboratories confirmed the presence of the first three antibodies, but the anti-Fy^a, which was detectable only in fresh serum, was confirmed only by one other Honolulu laboratory.

At birth the Group B, Rho (D) positive, S-infant had a positive direct Coombs test, 2.5 mgm per cent total cord bilirubin and 10.8 gm hemoglobin per 100 ml peripheral blood. A single exchange transfusion with O, D-, S-, K-, Fy(a-) blood was performed, with excellent results.

The infant's cord serum contained saline active anti-A and the following antibodies detectable by indirect Coombs: anti-A, anti-B, anti-D, anti-K, anti-S, and anti-Fy^a.

An eluate from the infant's cord red blood cells contained anti-D and anti-B.

Laboratory Administration at The Queen's Hospital

Through the years most hospital laboratories have become increasingly busy and therefore more complex in organization and administration. At The Queen's Hospital laboratory, administrative duties at the technologist level are now handled by a chief medical technologist and an assistant chief medical technologist.

Under the direct supervision of the pathologist, the chief technologist oversees the general operation of the clinical laboratory. Specific areas of responsibility assigned to her are personnel management, purchasing, and implementation of policy.

The broad spectrum of personnel management covers disciplinary action, personnel schedules, interviewing of applicants, and evaluation of employees.

Purchasing of laboratory equipment and supplies, an important business aspect of the modern laboratory, is also handled by her. Included in this are arranging for preventive maintenance contracts and repair orders necessary to keep the automated, electronic, and mechanical equipment fully operational.

Implementation of policy is perhaps one of the most important of the chief technologist's functions, and results in better planning, adequate utilization of physical facilities, more suitable personnel organization and recognition of operational defects.

In addition to the duties mentioned above, the chief technologist at The Queen's Hospital is also in charge of the School of Medical Technology and the histology department, as well as housekeeping, glassware cleaning, and clerical staffs.

The assistant chief technologist handles all of the technical problems of the evening shifts as well as those of the hematology, urinalysis, bacteriology, serology, blood banking and clinical chemistry departments. These problems cover a wide range and mean a full-time job.

Christmas Candy Sale

For its annual money raising project, HSMT will again sell See's of California Candies for Christmas. If past experience is any indication, this year's project should be just as successful as the last, if not more so.

While perhaps a bit optimistic, a goal of 1,400 pounds of candy has been set. If this goal is met, it will enable the Society to finance adequately many of the educational and professional programs planned for the coming year.

A project such as this cannot be a success unless each member does his share. It is not enough to approach friends and associates who work with you or in the office next door. Make an extra special effort. If every member does this, the project cannot help but be a huge success.

Finance Chairman Gilbert Gima has been pushing the idea of advance orders and sales to friends (especially your doctor friends) and to individuals who use candies as gifts during the Christmas season. He hopes that this emphasis will be successful.

A last minute booster: Don't quit selling until all candies ordered have been sold. For those of you who have not ordered any candies yet, please contact Gilbert Gima at his home (628-086) or at work (628-411) and your candies will be delivered *wiki-wiki.*

Reminder—Schedule of Annual Dues

As you approach potential members to join ASMT-HSMT, their big question always has been —and always will be, "How much does it cost?" Following is a list of the membership fees. It is never too late in the year to be approved as an HSMT candidate for membership. The fee for a first-time member is adjusted to the date of enrollment. Effective this year, there will no longer be a $2.00 reinstatement fee.

HSMT-ASMT FEES

Fiscal Year (ASMT-HSMT): July 1-June 30.
Dues Payable: May 1 through December 30.
Amount: $18.00 ($12.00 to ASMT, $6.00 to HSMT, includes subscription to HAWAII MEDICAL JOURNAL).

First-Time Members: May 1 through December 30—$18.00, January 1 through April 30—$9.00. Fee for recent student members will be prorated.

HSMT Members Only: $6.00, Annual; $3.00, Semiannual.

The society is as strong as its membership. An ambitious program—seminars, workshops, scholarship fund—can be met only through a widely representative organization.

Class of 1965

The Medical Technology students of the Class of 1965 have long since completed their internships at our local hospitals and have joined our ranks as ASCP-registered medical technologists. Who are they, where are they, and what are they doing now?

Alphabetically they are: Patricia Anne Dennis, St. Francis Hospital, Honolulu; Claire Fukushima, clinical laboratory, Los Angeles, California; Takeko Iha, St. Francis Hospital, Honolulu; Eleanor Kamada, Medical Arts Laboratory, San Francisco, California; Noreen Kawamura, St. Francis Hospital, Honolulu; Irene Matsuo, Kaiser Foundation Hospital, Santa Clara, California; Ethel Naito, Wilcox Memorial Hospital, Kauai; Judith Nitta, St. Francis Hospital, Honolulu; Vicky Nojima, St. Francis Hospital, Honolulu; Leah Taga, Straub Clinic, Honolulu; Marian Takehara, The Queen's Hospital, Honolulu; Irene Teruya, Medical Arts Laboratory, San Francisco, California; and Lillian Uemori Oie, Research Laboratory, Kuakini Hospital, Honolulu.

Class of 1966

This year's students and their hospitals of training are as follows: Carolyn Adachi, Susan Hess and William Matsuura at St. Francis Hospital; Betsy Mae Kawamoto, Kathryn Saiki and Sharon Ulshoeffer at The Queen's Hospital; Karen Kimura, Kathleen Okamoto, Jean Otake and Gwynne Takeda at Tripler U. S. Army General Hospital; Geraldine Kiyabu and George Padilla at Kuakini Hospital; and Angel Ramos and Brenda Shiraki at Kaiser Foundation Hospital.

Erratum and Addendum

Felice Kaulukukui, Placement Chairman, was inadvertently omitted from last issue's list of HSMT Standing Committee Chairmen.

Anyone interested in job openings and other employment information should get in touch with her at Maluhia Hospital.

Many Hawaii Doctors Are Increasing Their Cash Income

— As You May Do —

Collect 95% of your accounts receivable each month — every month

Through the use of PROFESSIONAL SERVICES COMPUTERIZED BILLING you can realize: *increased income, better Patient relations,* and the "Peace of Mind" which comes from *knowing* that your Accounts Receivable records are being handled *accurately and efficiently* at all times.

FOR COMPLETE INFORMATION

Call 567-737

Professional Services

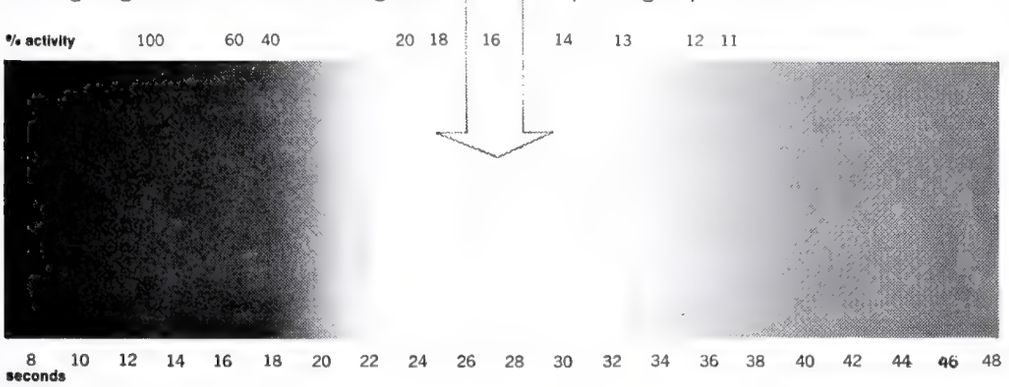
1350 So. King St., Honolulu

Personalized Services for Professional People is our Specialty

in prothrombin time testing

this is the critical range

because it's the safety zone for the patient on oral anticoagulants. To prevent the formation of another thrombus, anticoagulants slow the enzyme reactions of coagulation, by depressing the activity of certain clotting factors. As enzyme activity is reduced, the patient's plasma becomes far more sensitive to minor defects in the test system. Such defects (e.g., smudged glassware or a few degrees difference in temperature) are more apt to cause *longer* times than shorter ones. (An erroneously long time reported to the clinician may result in the patient's dosage being reduced to a dangerously low level.) To reveal defects, the control plasma must react with the same sensitivity as the anticoagulated patient's plasma. If it does not, it will not detect a falsely prolonged prothrombin time.





this is the control plasma that works in the critical range

because, in 1+4 dilution, Diagnostic Plasma Warner-Chilcott reacts with the same sensitivity as the anticoagulated patient's plasma. (Not all control plasmas do. To enhance stability, excess clotting factors are added to some. Even when diluted 1+4 they still have sufficient activity to cause prothrombin times to fall near normal.) Diagnostic Plasma Warner-Chilcott should be run routinely in the normal range (undiluted) and in the therapeutic range (in 1+4 dilution). As a normal control it reveals defects in the test system that could affect normal plasma. As a therapeutic control (because in dilution its enzyme activity is comparable to that of the anticoagulated patient) it reveals defects in the test system that could otherwise falsely prolong the prothrombin time of the patient on therapy.

GENERAL DIAGNOSTICS DIVISION
WARNER-CHILCOTT DIV. MORRIS PLAINS N.J.

Notes and News *continued from 170*

weeks more to Hawaii, he retorted, "If you can explain why this would be *normal,* I'll quiet down. There are at least three ships a week to Hawaii and they take from five to eight days to make the trip." What can our bureaucrats say to such logic?

In response to inquiry regarding possible flooding of local hospitals when most of the Medicare provisions go into effect July 1 next year, our imperturbable county president **Bob Wong** stated explicitly, "There should be no rush to our hospitals for two reasons: (1) The number of old people in the State of Hawaii is much lower than the national average. (2) The majority of old people in Hawaii are covered by hospital insurance. They have no need to depend on Medicare." He also pointed out that there has never been a case of a person in Hawaii who has been denied medical care because of financial difficulty.

Bob Spencer, State Hospital director, told the Ala Moana Kiwanis Club that state governments are "robbing Peter to pay Paul" in competing for specialists in mental health. He pointed out that salaries offered specialists in Hawaii are far below mainland standards, but he felt that "specialists can be attracted and retained in areas where they are given a chance to develop new ideas and methods of treatment of the mentally ill."

Pious **Sau Ki Wong,** chairman of the Medicine and Religion Committee, commented, "Most doctors have always thought man to be more than just a physical body. There also is the spiritual, emotional, and social self." We feel that proselytizer Sau Ki truly understands the psychological makeup of his fellow physicians for he says, "Doctors are peculiar. If they think you are telling them what to do—Bang! You have a revolution. We don't want doctors to think we are trying to push Christianity on them." His committee has invited the Rev. Dr. Paul McCleave, Director of the Department of Medicine and Religion of the AMA, to speak at a November 16 Mabel Smyth Auditorium meeting where 200 doctors and ministers of all faiths will gather to get acquainted.

We feel that it is time some of the anonymous contributors to our local papers are given their due credit. **John Roberts** has been writing a folksy, popular column entitled "Hawaii Doctor" for the *Star-Bulletin,* and **Gene Ahern** is the author of the informative pediatric series, "Keiki Care," also for the *Star-Bulletin.* We wish to thank these two authors in particular because it takes considerable time and talent to write for the lay public, especially when the language has to be simple, readable, and accurate. Two Japanese linguists, **Noboru Akagi** and **Kazushi Tanaka,** have been contributing to another weekly column in the *Hawaii Times* called, *"Shijō Igaku Mondō"* (Roughly translated: Medical Question and Answer Column), which has had instant popularity with the Japanese-speaking community.

When the ILWU leaders charged that we were conspiring to increase fees and proposed to set up their own clinic, they were quickly deflated by **Bob Wong's** pointed argument that there was no dispute over fees, that the doctors were only seeking a stronger collective bargaining position with the HMSA, and that we were not the least concerned about their proposal to establish their own clinic. **Chew Mung Lum,** able chairman of the Medical Care & Plans Fees negotiating subcommittee, reiterated that the union's charges "merely cloud the issue. The issue is that we're trying to establish the principle of collecting bargaining." This sounds like rhetoric quoted directly from these very same union leaders. Usually vociferous **Keith Kuhlman** in a Letter to the Editor quietly lampooned the union leadership with "Is it possible that their interests are not that of community good, but merely shallow, predatory, smear techniques designed

continued page 178



These glasses are important to him—in his work, socially, and in terms of his physical well-being.

When's the last time you had an eye check? Schedule an appointment soon with your eye physician.

OBRIG Contact Lenses fitted by prescription. We are GUILD OPTICIANS, serving Hawaii since 1939.

GUILD OPTICIANS

OPTICAL DISPENSERS

of Hawaii, Inc.

1133 BISHOP ST. 576-570
312 ALA MOANA BLDG. 976-925



100% Ti Root Okolehao is made from the Levulose in the Ti Plant (Tuber of Cordyline Terminalis), one of the richest known sources of Levulose.

The congeneric count of the Toxics in Ti Root Okolehao and Whiskey is as follows:

Analysis or Test	Ti Root Okolehao (36.0% by weight—43.2% by vol.)	Whiskey
Ethanol	(86 proof)	Varies
Extract (solids)	0.23%	0.18-0.50%
Fusel Oil	0.04%	0.10-0.25%
Acids	0.01%	0.01-0.10%
Esters	0.03%	0.01-0.13%
Aldehydes	trace	trace-0.03%
Formaldehyde	absent	absent
Furfural	absent	trace-0.01%
Alkaloids	absent	absent
Heavy Metals	absent	absent
Methyl Alcohol	absent	absent
Tannins	trace	0.02-0.07%
Odor on Evaporation	No disagreeable or irritating odor	Varies

TESTED BY HAWAII TESTING LABORATORY

Ti Root Okolehao is manufactured in a modern distillery that meets all of the standards of the U. S. Government.

TI ROOT OKOLEHAO HAWAII, INC.

KAILUA — KONA — HAWAII

Homer A. Hayes, *Pres.*

LOOK WHAT HAPPENS WHEN YOU ADD AIR CONDITIONING!



EMPLOYEES
feel better,
work better



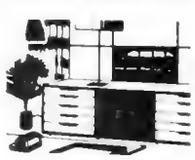
PATIENTS
are more relaxed,
more comfortable



RECORDS AND FILES
remain cleaner, are
better preserved



INTERIORS
are less noisy, stay cleaner,
need less care



Call your commercial engineers, 574-971, to see how you can make all this happen, all year 'round, in your offices.

Hawaiian Electric

to intimidate good patient-doctor relationships?" Keith then proceeded to refute point by point their ridiculous accusations and restated the real issues on hand. We feel that when physicians can stand together on basic issues as they have done recently, we have come a long way.

Community Notes

We lost a dear friend, an avid golf partner, a comrade-in-arms, and a respected fellow physician. Funeral services for **Richard Kainuma** were held on September 6 at the Hosoi Garden Mortuary where friends and relatives filing past briskly for a last view still took over an hour. **Toru Nishigaya** gave the eulogy and **Herbert Takaki, Mitsuo Tottori** and **Shoyei Yamauchi** were pall bearers. We overheard this comment, "This is like a state funeral. If I had half this crowd, I'd die happy even today."

Stanley Kobashigawa was general chairman of the Pearl City Seventh Annual Fair which raised funds for community services such as the Little League, Pop Warner, Easter Egg contests, and Halloween and Christmas parties. **Bal Raj Mehta,** head of the Maili Kaiser Clinic, was named Vice President of the Waianae Businessmen's Association.

Altarations

Judging from the society page clippings, we seem to have nothing but daughters to give away. **Ivar Larsen** started this trend by giving his Greta away in December last year and **Sam Yee** followed suit with his Judith Lingshih in February. **Les Vasconcellos** gave away his Nancy at St. Theresa's in June, but then it became more fashionable to give daughters away at the Central Union for **Tad Hata** gave away daughter Eleanor Reiko on July 4, **C. M. Burgess** gave Patricia Kathryn away on July 22, **Sam Allison** his Kathryn Lynn on July 23, **Jimmy Wong** his Ruth Hoong Lan on August 15, and **L. Q. Pang** daughter Deane Hung Chow on August 22, all at the Central Union. **Richard Dodge** broke this trend and gave away his daughter Diana Kanani at his Kahala home on August 20. **Ray Yap** gave away daughter Linda Mei Li at St. Andrew's on August 8, and **William Patterson** of Wailuku daughter Dorothy Jane at the Wailuku Union on August 21. **Irvin Tilden** also gave away daughter Mary Lehua at St. Clement's on August 28. We seem to be promoting a give-away program.

Fortunately we found a few sons. **Patrick Cocketts** of Lihue welcomed home their son Mike and new bride in June, and more recently **H. Q. Pang's** son Rodney Mun Kai was married at St. Andrew's on August 29.

More Notes from the University

Donald F. B. Char is the new Director of Student Health Services. Other recent University appointees include **Richard K. Blaisdell** and **Robert W. Noyes.** Dr. Blaisdell, the Mayor's nephew, will arrive from Chicago next May to become Professor of Medicine. His principal interest is in hematology. Dr. Noyes, formerly Professor of Obstetrics at Vanderbilt, has already assumed his duties as Professor of Anatomy and Associate Dean for Professional Affairs. Mr. Robert Stone, the noted architect who designed the U. S. Embassy in New Delhi, will design the new medical school. Target date for admitting the first class is the fall of 1967. Barracks housing is currently being provided for pathology, medicine, pesticide research, public health, and toxicology. The two new

continued page 180

Some people get away from colds and sinusitis

by getting away from frigid weather



. . . but if your patient can't get away, relieve sneezing, running nose, and congestion of colds and sinusitis all day or all night with one

ORNADE® SPANSULE® CAPSULE

Trademark brand of sustained release capsule

Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride, and 2.5 mg. of isopropamide, as the iodide.

Summary of contraindications, cautions and side effects: Do not use in patients with glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal obstruction or bladder neck obstruction. Use with caution in the presence of hypertension, hyperthyroidism, or coronary artery disease. Drowsiness; excessive dryness of nose, throat or mouth; nervousness or insomnia may occur on rare occasions but usually are mild and transitory.

Before prescribing, see SK&F product Prescribing Information.

Smith Kline & French Laboratories SK&F

professors are to be housed in the former School of Nursing at St. Francis Hospital.

Clinical Center Studies

James Phang, M.D., is asking the cooperation of physicians in a continuing clinical study of calcium metabolism and calcium kinetics being conducted by the National Institutes of Health in Bethesda, Maryland. Of interest for this study are patients with hypoparathyroidism, hypercalcemia of malignancy without bony metastases, Paget's disease, osteogenesis imperfecta, and idiopathic osteoporosis in males. Patients with roentgenologic evidence of bone disease, as well as documented serum calcium abnormalities, would be of special interest.

Patients for this study should be clinically stable, ambulatory, continent of urine and feces, and be willing to participate in metabolic balance studies, including administration of Ca^{47}, during a 30-day admission to the Center. Physicians interested in having their patients considered for this study may write Dr. Phang, Room 3-B-40, National Institutes of Health, Bethesda, 20014.

Betsy Fund to Aid Physicians

Recent flood losses, which caused the greatest damage to the offices and homes of physicians caught in the path of Hurricane Betsy, are not covered by insurance, and the Louisiana State Medical Society is soliciting contributions to aid physicians whose offices and homes were totally destroyed. Contributions to the Betsy Fund should be sent to the Louisiana State Medical Society, 1430 Tulane Ave., New Orleans, 70112.

HAWAII CALENDAR*

HMA ANNUAL MEETING, May 11-15, 1966, Princess Kaiulani Hotel. **AMA ANNUAL CONVENTION,** June 26-30, 1966, Chicago. **PAN PACIFIC SURGICAL** Association 10th Congress, Part I, September 20-28, Princess Kaiulani. Parts II and III to follow in Japan, Hong Kong, The Philippines, Thailand, India, Singapore, Australia, and New Zealand.

DECEMBER

December 1-31—**Visiting Professor** Sidney Carter. Second month.

December 15-17—**HAGP-Lilly Seminar** presenting Kay Clawson of the University of Washington School of Medicine talking on "Common Foot Problems."

JANUARY

January 1-February 28—**Visiting Professor** Robert McKay from the Department of Pediatrics, University of Vermont.

January 8-February 4—**Visiting Professor** Mark Ravitch from the Dept. of Surgery, Johns Hopkins School of Medicine. Honolulu.

January 23-29—Pacific Coast Dental Conference. Local contact: Dr. Floyd Sandberg, Suite 720, Ala Moana Bldg., Honolulu.

January 24-28—**Postgraduate Course** in Allergy presenting James W. Willoughby. Princess Kaiulani.

* Errors in listings are not the responsibility of the HAWAII MEDICAL JOURNAL.

continued page 182

Hygroton®
brand of chlorthalidone

the longest-acting diuretic

Indications: Many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.
Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.
Side Effects: Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.
Average Dosage: One tablet (100 mg.) daily with breakfast.
Availability: Tablets of 100 mg. in bottles of 100 and 1000.
For full details, see the complete prescribing information.

*Dorhout Mees,E.J.,and Geyskes, G.G.: Acta med.scandinav. 175:703,1964.

Photos: A 59-year-old woman with hypertensive cardiovascular disease and edema resistant to low-salt diet and bed rest. The patient lost 8½ lbs. in one week with a single tablet daily of Hygroton, brand of chlorthalidone.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York HY-3992 PC



good riddance

Hygroton, brand of chlorthalidone, gets rid of edema efficiently. Your edematous patients will generally need far fewer tablets than with most diuretics. And they'll generally save more on prescription costs. One tablet a day is a popular dosage. So is one tablet every other day. You may even find half a tablet three times a week does the job. No other diuretic works as long. And none has as much natruretic activity per tablet.* For good riddance of edema with the least number of tablets, prescribe Hygroton, brand of chlorthalidone.

Hygroton® brand of chlorthalidone

Geigy

OCEANSIDE GOLF

on beautiful Kauai

Enjoy uncrowded golfing any day of the week, any week of the year at championship Wailua Golf Course . . . just across the street from your delightful Polynesian accommodations at

Coco Palms Resort



Rates from $17 per day, double
Special group package rates also available

Island Holidays Resorts



Call 931-111 for information and reservations

Notes and News *continued from 180*

January 31-February 11—**Visiting Professor** Fred J. Ansfield from the Dept. of Clinical Oncology, University of Wisconsin Medical School. Honolulu.

FEBRUARY

February 1-28—**Visiting Professor** Robert McKay, Second month.

MARCH

March 1-31—**Visiting Professor** Carl P. Huber, M.D., Professor and Chairman, Dept. of Ob-Gyn, Indiana University Medical Center. Kapiolani Hospital.

March 4-14—**Visiting Professor** Macdonald Critchley, Neurologist, from the Dept. of Medicine, National Hospital, London. Honolulu.

March 7-23—**Visiting Professor** Ralph Jacox from the University of Rochester, Department of Medicine. St. Francis Hospital.

MAY

May 11-15—HMA Annual Meeting. Princess Kaiulani Hotel. ■

Book Reviews *continued from 168*

parts of the text. Dr. Greenhill's suggestion that the postpartum patient be catheterized routinely daily even with spontaneous voiding until the residual urine is less than 60 cc will find disagreement among clinicians. The rationale that residual urine may become infected is difficult to accept in the face of easy infection from catheterizations no matter how careful the technique. Also, with the many birth control devices currently available, the intracervical stem pessary appears to have lost its value, especially since it is prone to cause infection.

However, variance of opinion should not deter one from deriving valuable guidance from this classic outline of outpatient gynecology for is not a text to stimulate thought as well as to direct?

MILLARD S. L. SETO, M.D.

Cardiovascular Drug Therapy
The Eleventh Hahnemann Symposium

Editors Albert N. Brest, M.D., and John H. Moyer, M.D., 531 pp., $19.75, Grune & Stratton, 1965.

THIS SYMPOSIUM on current cardiovascular drug therapy is readable and worth reading. In this age when physicians are being constantly bombarded and confused with the introduction of myriad new drugs, there arises a need for a clear appraisal of these drugs with their attendant shortcomings which this book fulfills.

At the beginning of each of the sections on the various drug groups is an article setting forth the ideal properties of that particular group of drugs (such as "The ideal antihypertensive") so that the reader may judge for himself how closely each drug approaches the ideal in the subsequent articles, which are concise and written by physicians eminent in cardiology.

FRANCES NAKAMURA, M.D.

Physiology of the Eye: Clinical Application, 4th Ed.

By Francis Heed Adler, M.A., M.D., F.A.C.S., 889 pp., $18.75, The C. V. Mosby Company, 1965.

THIS EDITION of Adler's "Physiology of the Eye" makes many additions to our knowledge. Much of this, however, is at the laboratory level and for practice ophthalmology

continued page 184





TROUBLED BY BLEMISHES?

Don't let unsightly veins keep you from the beach. Use COVERMARK. . . . It's completely waterproof, covers without an artificial look to conceal burns, birthmarks, surface scars, dark circles, and brown spots.

Lydia O'Leary
OF HAWAII
1010 ALAKEA ST., ROOM 202
PHONE 574-704



FOR YOUR ELDERLY ARTHRITIC PATIENTS...

an effective **GERIATRIC** antiarthritic with

REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention... the enteric coating assures gastric tolerance... and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

Pabalate-SF

In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

—the new, convenient way to prescribe
PABALATE-SODIUM FREE

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

this makes tiring reading. There is a constant reference to clinical application of these physiological factors, but one must search for them. The section on ocular motility is very complete. It is a good basis for clinical neuro-ophthalmology. The chapter on visual pathways carries the visual impulse down to the cellular level from retina to cortex. The clinical implication at the cortical level of visual differentiation, for example, recognizing form and recall of objects seen, makes for possible interesting clinical application. This book should be for ready reference in every ophthalmologist's library.

WAYNE WONG, M.D.

New Perspectives in Psychoanalysis (Sandor Rado Lectures 1957-1963)

Editorial Committee: George E. Daniels, M.D., Chairman, James P. Cattell, M.D., Willard M. Gaylin, M.D., Terry C. Rodgers, M.D., and Daniel Shapiro, M.D., 328 pp., $9.50, Grune & Stratton, 1965.

THIS VOLUME is an interesting collection of essays by psychoanalysts about their field. It is primarily philosophical and represents a critical survey of various aspects of psychoanalysis with an attempt to bring up to date their viewpoints and orientations since the time of Freud.

The average medical man will find it difficult reading as will the average psychiatrist not too well grounded in psychoanalytic thinking and philosophy. There are a number of provocative discussions and it is worthwhile plowing through the difficult reading matter, but it is definitely not something one can lightly read.

It should be of special interest to those grounded in psychoanalytic thinking.

J. ROBERT JACOBSON, M.D.

Simple Splinting: The Use of Light Splints and Related Conservative Therapy in Joint Diseases

By Jerome Rotstein, M.D., 126 pp., $6.50, W. B. Saunders Co., 1965.

THIS BOOK gives a detailed history of arthritis, particularly rheumatoid arthritis, and the chronological development of splinting, including excellent photographic illustrations of old and new methods.

The section on pharmacologic treatment of rheumatoid arthritis is well written. The indications for and contraindication to steroid therapy in the treatment of rheumatoid arthritis are emphasized.

It provides an interesting and worthwhile evening's reading for interns and residents as well as orthopedists.

GABRIEL W. C. MA, M.D.

Lung Cancer Surgery and Survival

By John Borrie, M.B.E., Ch.M., F.R.C.S.(Eng.), F.R.A.C.S., 202 pp., $9.95, Appleton-Century-Crofts, 1965.

NEW ZEALANDER John Borrie, known to many Hawaii surgeons, has written a good book on the results of surgical treatment of lung cancer. It is not a treatise on surgical techniques and concerns early technical methods which, despite numerous recent efforts, have not been significantly improved. Between 1941 and 1950, 26 per cent of 1,800 patients were operated and tumor removal accomplished in 19 per cent (200 patients), by pneumonectomy in 194 and lobectomy in 6. After ten years, 35 patients were still living, which is just under two per cent of the entire group. The fact that these survivals represent 17+ per cent of the patients in whom tumor excision was accomplished should not be used to obscure

continued page 187

HAWAIIAN AIRLINES
TIMETABLE

℞

DC-9 Royal Fan Jet

and

Super 600
Jet Power Convair

Just what the doctor ordered...

Whether the neighbor island trip is on business or pleasure, schedule convenience is important to the busy professional man. Hawaiian Airlines has more frequent flights to all Island destinations . . . soon to feature new jet-comfortable, jet-quick travel with the DC-9 Royal Fan Jets and Super 600 Jet-Power Convairs.

HAWAIIAN AIRLINES
HOLDER OF THE WORLD'S SAFETY RECORD

THREE TIMES A YEAR

Your patients without a plan to economically protect them when they are in need of medical assistance may join Hawaii's own community service medical plan on an individual basis three times a year.

Membership is open to qualified individuals of all ages in
MARCH — JULY — *and* — NOVEMBER

HMSA is a non-profit, community service organization. As such it is able to provide tremendous benefits for reasonably low dues.

HMSA is the medical plan which gives you free choice of doctors and hospitals — an extremely desirable feature.

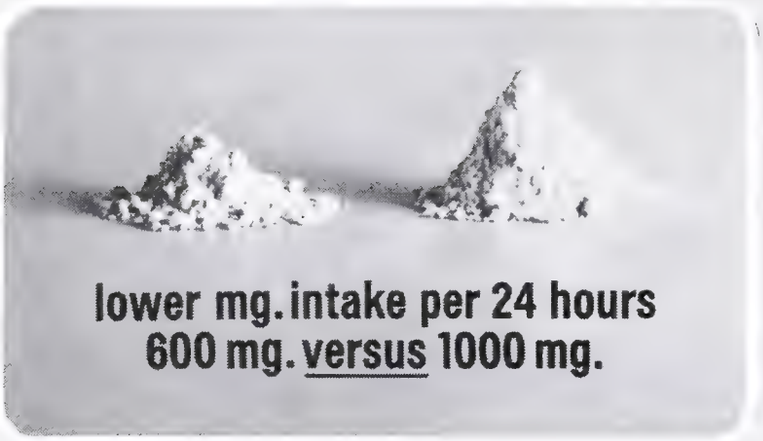
Member of Western Conference of Prepaid Medical Service Plans



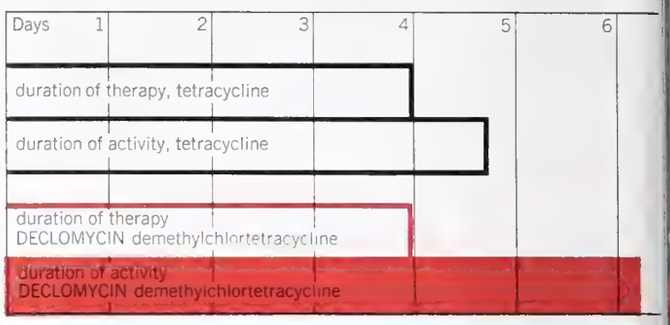
® BLUE SHIELD PLAN FOR HAWAII

HAWAII MEDICAL SERVICE ASSOCIATION

For 25 Years – Hawaii's Own / Hawaii Owned

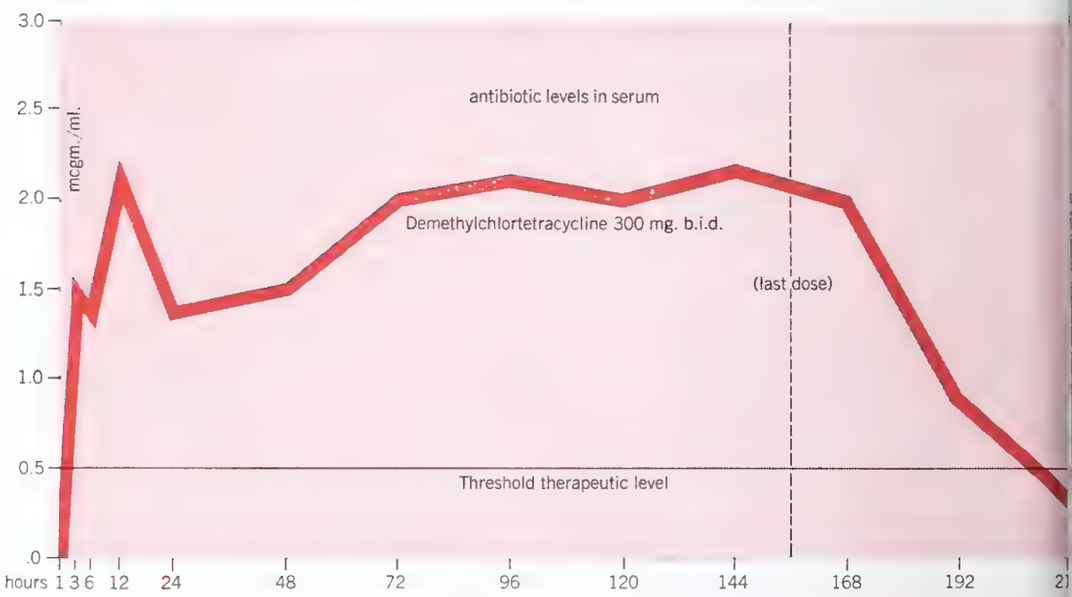


lower mg. intake per 24 hours
600 mg. versus 1000 mg.

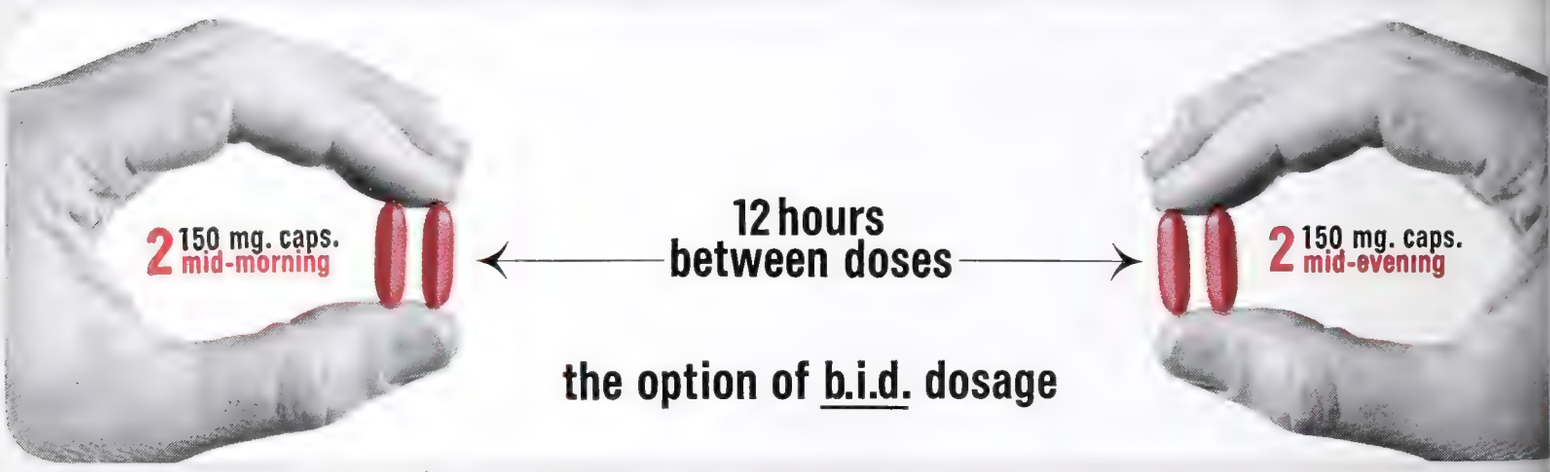


1-2 days' "extra" activity

higher activity levels than other tetracyclines— with less peak-and-valley fluctuation



From Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.; Amer. J. Med. Sci. 243:296 (Mar.) 1962



the option of b.i.d. dosage

the "extra" benefits raise the level of antibiotic control

DECLOMYCIN
DEMETHYLCHLORTETRACYCLIN
150 mg. CAPSU

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Side effects typical of tetracyclines include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation) and increased intracranial pressure (in young infants). Also, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. Because of reactions to artificial natural sunlight (even from short exposure and at low dosag patient should be warned to avoid direct exposure. Stop d immediately at the first sign of adverse reaction. It should not taken with high calcium drugs or food; and should not be ta less than one hour before, or two hours after meals.

Capsules, 150 mg. and 75 mg. of demethylchlortetracycline H

Average Adult Daily Dosage: 150 mg. q.i.d. or 300 mg. b.i.d.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

8035-9720

the truly dismal picture of lung cancer by elevating surgical excision to the status of curative treatment.

However, all thoracic surgeons are hopeful that any given patient might be one of this tiny but fortunate group. Herein lies the value of this book. It is a complete and detailed analysis which, year by year for a decade, matches the morbid anatomy with the surgical results. No other study of this nature is nearly as complete and few cover a ten-year period.

Excluding distant metastases, cell type, and other pathologic features of lung cancer, involvement of lymphatics and bronchopulmonary and mediastinal nodes was found to be the chief factor influencing surgical results. A good portion of the latter was presented by Mr. Borrie to the Pan-Pacific Surgical Congress of 1960 in Honolulu.

PAUL W. GEBAUER, M.D.

Rehabilitation Medicine: A Textbook on Physical Medicine and Rehabilitation, 2d Ed.

By Howard A. Rusk, M.D., 668 pp., $15.50, The C. V. Mosby Company, 1964.

THIS BOOK manages to get together a lot of medical and paramedical concepts that are interrelated and one wou.d have to get such information from a great many sources at considerable expenditure of time. This book should be in hospital and medical libraries where physicians should refer to it and consult the bibliographies of each section for information in depth on given items involving rehabilitation medicine.

R. FREDERICK SHEPARD, M.D.

★Ophthalmology: Principles and Concepts

By Frank W. Newell, M.D., M.Sc. (Ophth.), F.A.C.S., 491 pp., $12.25, The C. V. Mosby Company, 1965.

THE RAPIDLY CHANGING concepts in diagnoses and therapy in the field of ophthalmology require the interested student to look for this information in many different textbooks and journals. Dr. Newell's textbook brings the latest information in a brief, easy-to-understand manner. It is intended mainly for students and residents in ophthalmology, although the presentation allows a good review for ophthalmologists. Chloroquine retinal toxicity and steroid-induced glaucoma have become known only in recent years and every physician should read this section.

Detailed surgical treatments have been omitted, as they should be in a textbook like this. However, medical therapy of the more common diseases of the eye is presented with clarity. The practitioner will find the section on pharmacology quite interesting. It is always a source of amazement to find out the multitude of ways in which the eye can be affected by present-day drugs.

This textbook is not intended to give a complete insight into ophthalmology. It is an excellent informative source to study the basic principles and for this reason it should be highly recommended.

S. SUGIKI, M.D.

Pharmacology and Therapeutics, 6th Ed.

By Arthur Grollman, Ph.D., M.D., F.A.C.P., with the collaboration of Evelyn Frances Grollman, A.B., M.D., 1181 pp., $15.00, Lee & Febiger, 1965.

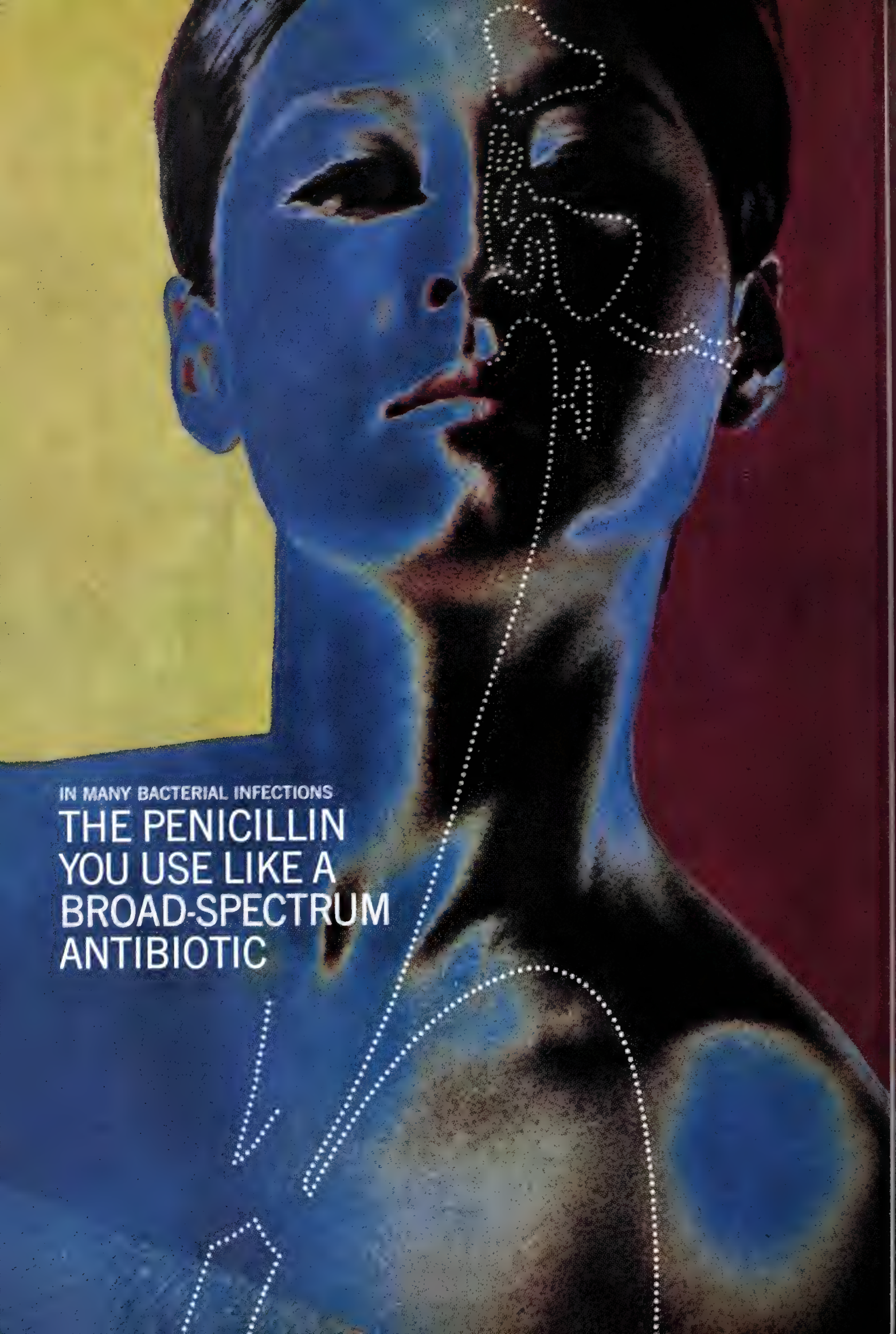
THE USUAL COURSE in pharmacology is a boring and sterile presentation of a science which is an important part of medicine. Credit for this lies in part with the

continued page 190



For courtesy demonstrator at your home or office, call 506-211

On display at SCHUMAN'S
1234 South Beretania St.


IN MANY BACTERIAL INFECTIONS
THE PENICILLIN YOU USE LIKE A BROAD-SPECTRUM ANTIBIOTIC

NOW BASIC BACTERICIDAL ANTIBIOTIC THERAPY IN RESPIRATORY INFECTIONS

Instead of tetracyclines or chloramphenicol—instead of erythromycin or triacetyloleandomycin—you can now treat bacterial infections with the first broad-spectrum penicillin—Polycillin.

Unlike these other agents, which are primarily bacteriostatic, Polycillin is bactericidal.

As a broad-spectrum antibiotic, Polycillin is not only active against Gram-positive organisms, but its activity against Gram-negative organisms (such as H. influenzae and E. coli) "...is considered to be greater than that found with tetracycline and chloramphenicol."[1] *Note, however, that Polycillin is not indicated in resistant staphylococcal infections.*

Polycillin poses little risk of toxicity, an advantage not shared by older broad-spectrums; it is as safe and well-tolerated as the traditional penicillins.

Because it combines safety with bactericidal effectiveness against D. pneumoniae, streptococci, and H. influenzae, Polycillin is basic therapy in bronchitis, sinusitis, pneumonitis, otitis media, tonsillitis and pharyngitis.

In over 500 such cases in which complete data were available, Polycillin effected cured or improved responses in 95%![2] And of all bacterial infections—respiratory, g.u., g.i., etc.—treated with Polycillin during the past four years (over 2,000 cases in which complete data were available), 87.8% were cured or improved.[2]

In your next patient with respiratory infection, Rx Polycillin, 250 mg. *q.* 6 *h.* (average dose).

AVAILABLE: Polycillin Capsules and Oral Suspension. ALSO: Polycillin-N™ For Injection (sodium ampicillin), for I.M. or I.V. use.

References: 1. Brown, D.M., and Acred, P.: Brit. M. J. 2:197 (July 22) 1961. 2. Based on published reports and data on file at Bristol Laboratories.

Bristol Therapeutic Summary:

For complete information consult Official Package Circular.

Effectiveness: Polycillin (ampicillin trihydrate) is clinically effective in the treatment of infections of the respiratory, genitourinary and gastrointestinal systems caused by susceptible Gram-negative bacteria. Although clinical studies have demonstrated it to be effective in the treatment of infections caused by susceptible Gram-positive organisms, its relative effectiveness compared to that of older penicillins, in these infections, has not yet been established.

Side Effects: Infrequently, skin rash, pruritus, urticaria, gastrointestinal disturbances (nausea, vomiting, diarrhea) and anaphylactic reactions.

Precautions: Allergic responses may occur, particularly if there has been prior allergic sensitization to penicillin or other allergens. Superinfection with nonsusceptible organisms may occur during therapy.

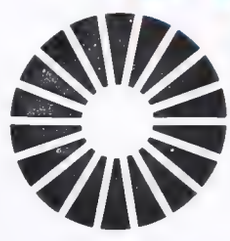
Usual Dose: Adults 250 mg. or 500 mg. *q.* 6 *h.* (according to infection site and offending organisms).

BRISTOL

Bristol Laboratories
Division of Bristol-Myers Co.
Syracuse, New York

Polycillin®

(ampicillin trihydrate)



poor texts available for study. Those used usually contain elaborate presentations of the more esoteric aspects of pharmacology, whereas information which is of value to physicians is presented in a dull and matter of fact style.

This text to some degree reverses this trend. The authors have written a readable, authoritative, exhaustive, and, at least for the time being, up-to-date text.

It remains, however, a textbook, and whereas the authors point out in their preface that the teacher of pharmacology must not lose sight of the student's ultimate goal, that is, the application of this knowledge to the patient, they have paid much less attention to therapeutics than I would have considered necessary. Therefore, except as a reference book of materia medica, pharmacodynamics, and toxicology, it would be of limited value to the practicing physician.

M. G. Botticelli, M.D.

Roentgen Diagnosis of the Heart and Great Vessels, 2d American Ed.

By Erich Zdansky, M.D., translated by Linn J. Boyd, M.D., F.A.C.P., 423 pp., $26.50, Grune & Stratton, 1965.

Dr. Zdansky's book, adequately translated by Dr. Boyd, has as a primary intention the evaluation of the radiologic diagnosis of cardiovascular disease. The first and second sections of the book deal primarily with normal radiographic anatomy. The last four sections deal with diseases involving the heart, the pericardium, the pulmonary circulation, and the aorta. For the student of radiologic anatomy, the first one-fourth of the book is of interest since it is directed to evaluation of plain films and methods other than angiocardiographic approach. However, the field has rapidly progressed in the past few years and angiocardiography has become an extremely important aspect, and this represents one of the failings of this particular book since the angiocardiographic representations are neither numerous nor technically entirely satisfactory. The diagrammatic representations, particularly in the congenital heart diseases, are quite satisfactory, but diagrams cannot adequately replace radiographs.

The book treats of a number of subjects and does suffice as a fairly compact reference in a variety of areas. It can also be used for purposes of literature reference although the reference material is to a great extent European in nature. This might well pose problems of ready access.

In summary, the book does suffice as a fair summary in many areas of radiographic pathology. For detailed study, other references would be more suitable.

David Katz, M.D.

★Progress in Clinical Cancer, Vol. 1

Edited by Irving M. Ariel, M.D., F.A.C.S., 789 pp., $35.00, Grune & Stratton, 1965.

This compendium, in a well-planned format, is the first volume of a continuing series on the latest advances in the diagnosis and management of cancer. Seventy-six contributors from major cancer centers, authorities by their own right, have been appropriately chosen for their contributions to this volume.

The immunological aspects of cancer are comprehensively discussed in the beginning chapters, with emphasis on the importance of the lymphoreticuloendothelial system in host resistance and reactivity to cancer. Newer

continued page 192

YOU CAN
Rent
EVERYTHING FOR THE SICKROOM
THROUGH
The Only Complete Line of Sickroom Rental Equipment in Hawaii

INVALID LIFTERS
HOSPITAL BEDS
WHEEL CHAIRS
WALKERS
CRUTCHES
COMMODES

ALOHA RENT-ALLS
DAY, WEEK, OR MONTH—WE DELIVER
WINDWARD—767 KAILUA RD.—PH. 250-885

CUTEST UNIFORMS
Where Fashion is Foremost with Women in White
GOOD SERVICE IS UNIFORM WITH US
★
Our New Location is at
1969 S. KING ST. • PHONE 964-886
New Proprietor
Mr. Arthur M. H. Chung
★
We Carry All Name Brand Uniforms and Also Doctors' Jackets and Smocks
★
We Specialize in Custom Made Uniforms

Carnation

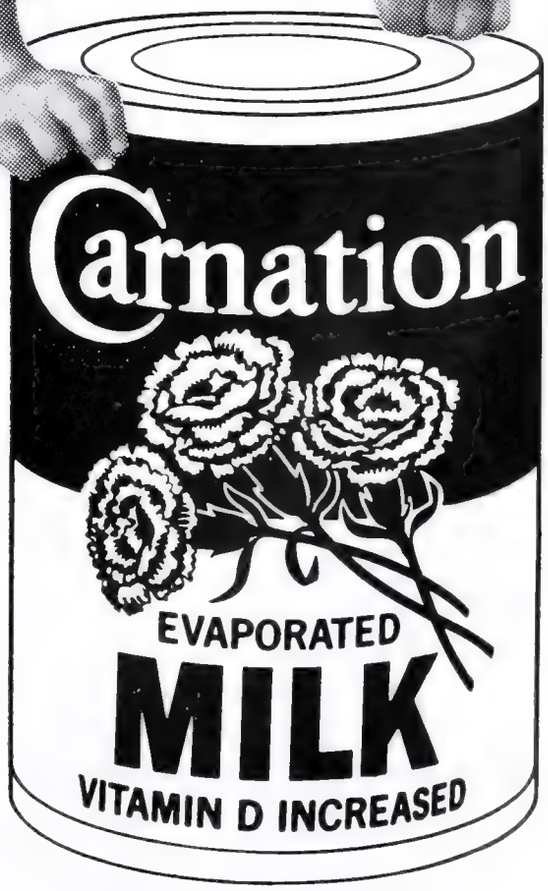
EVAPORATED MILK



1964
Carnation Healthy Baby Contest
$1,000 1st prize winner,
Richard Penron Rasa
of Honolulu, Hawaii

HAWAII'S HEALTHY BABY MILK...

1st CHOICE FOR INFANT FEEDING... No. 1 in the Islands for generations, ...available everywhere in Hawaii



"from Contented Cows"

diagnostic methods are discussed, including lymphangiography, thermography, and radioisotope photoscanning. An extensive section is presented on the use of chemotherapy in the treatment of cancer, the general consensus being that this modality offers at best only temporary palliation and is used primarily in those individuals deemed incurable by the standard measures of surgery or radiotherapy, or both. Specific cancers are discussed in the closing chapters, with emphasis on those lesions which present controversy as to approach in treatment.

For those who are primarily interested in the management of neoplastic diseases, this reference manual is highly recommended.

EDWARD L. S. JIM, M.D.

Anticoagulant Therapy in Ischemic Heart Disease

Miami Heart Institute International Symposium, 469 pp., $10.00, Grune and Stratton, 1965.

THE EDITORS of this volume have satisfied their intentions of providing an abundance of material. Many schools are represented. The data submitted by the authors and contributors appear comprehensive. Tables, figures, and illustrations are numerous and well reproduced. Despite their intention not to do so, the editors could have served a greater purpose by some form of summary synthesis of the vast amount of material presented. Such a summary, presenting the various viewpoints, is sorely needed in so controversial a field.

This volume should serve a useful function as source material.

BERNARD J. B. YIM, M.D.

Leopold's Principles and Methods of Physical Diagnosis, 3rd Ed.

By Henry U. Hopkins, M.D., 503 pp., $8.50, W. B. Saunders Company, 1965.

THIS BOOK of 465 text pages offers adequate coverage of such areas as chest (145 pages), abdomen (23 pages), and musculo-skeletal system (42 pages); with introduction to other areas, such as skin (7 pages) and nervous system (36 pages), which would require greater attention later in the curriculum. Other chapters deal with history taking, "psychiatric survey," vital signs, head, neck, breast, genitalia, anus and rectum, extremities, and pediatric examination.

The text is clear; illustrations are good and pertinent. Relative values of physical examination and x-ray are well stated (both are important).

No reference is made to leprosy. Here in Hawaii—and elsewhere—one would appreciate reference to palpation of the ulnar nerve at the elbow, ulnar anesthesia in the hand, and inspection for enlarged great auricular nerves. Thenar and hypothenar atrophy are mentioned in relation to five conditions other than leprosy.

NORMAN R. SLOAN, M.D.

Poisoning: Diagnosis and Treatment

By Sven Moeschlin, M.D., 707 pp., $29.75, Grune & Stratton, 1965.

THIS TEXTBOOK has appeared on the American scene as an English translation of a widely known Swiss reference on poisoning. It should prove to be an outstanding

continued page 194

Complete Line of
ORTHOPEDIC SUPPORTS AND ARTIFICIAL LIMBS FITTED TO PRESCRIPTION BY CERTIFIED FITTERS.

HOSPITAL CALLS MADE DAILY ON REQUEST.

ALL TYPES OF INVALID EQUIPMENT AVAILABLE FOR PURCHASE OR RENTAL.

C. R. NEWTON COMPANY
LIMITED
1575 S. BERETANIA STREET
HONOLULU, HAWAII 96814
TELEPHONE: 998-389

Your stationery is a reflection of you... be certain the reflection is good!

star-bulletin printing company

the hallmark of fine printing in honolulu



The Pain Is Gone

Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'* Compound with Codeine Phosphate gr.1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

as well as an authoritative source of information for doctors who treat cases of poisoning or who are interested in problems of environmental as well as industrial health.

The organization of material is excellent and there are sufficient references for further study. Most of all, the author is also drawing much from his 25 years of clinical experience. He gives detailed discussions and interesting case histories on the more prevalent types of poisoning, such as lead, thallium, carbon monoxide, certain types of insecticides, and drugs which can produce toxic effects through chronic use, such as salicylates, phenacetin, and hypnotics. Diagnostic aids and therapeutic regimens are well outlined.

RICHARD K. B. HO, M.D.

Textbook of Obstetrics

By John C. Ullery, M.D., Zeph J. R. Hollenbeck, M.D., and thirty-one contributors, foreword by Richard L. Meiling, M.D., 752 pp., $17.50, The C. V. Mosby Company, 1965.

THIS TEXTBOOK is prepared by the faculty of the Department of Obstetrics and Gynecology and the contributors from closely related specialties at one medical center. Each author has contributed to this volume in his special field of interest. The book is divided into three parts: the Conduct of Pregnancy, the Conduct of Labor and Delivery, and the Conduct of Puerperium. In Part One, the concise discussions of the problems involving pregnant women have been included after basic anatomy, physiology, pharmacology, and pathology are presented. Experiences reported by the outstanding authorities are included; the general philosophy and the specific methods described, however, are primarily those currently practiced at the Ohio State University Medical Center. In Part Two, the Conduct of Labor and Delivery are discussed as solutions to the specific problems of the pregnant women. The authors have tried to correlate their experiences with the pathologic entities seen in a large medical institution. In Part Three, Postpartum Sterilization, Normal Puerperium, Abnormalties of Puerperium, and Maternal Mortality are discussed.

The presentations in this book are primarily directed to the medical students, interns, and resident physicians who are enrolled in the programs of continuing medical education at one medical center. Many chapters are very worthwhile reading for all of us who deal with the pregnant women in terms of well-organized presentations, with good photographs, diagrams, and illustrations which help to clarify the materials presented. Despite certain limitations, and descriptions in detail of procedures replaced by current methods, the book is a good guide to the known and accepted care of the pregnant women from conception through involution.

THOMAS K. OSHIRO, M.D.

Also Received

A Synopsis of Contemporary Psychiatry, 3rd Ed.

By George A. Ulett, B.A., M.D., Ph.D., and D. Wells Goodrich, M.D., 299 pp., $6.75, The C. V. Mosby Co., 1965.

AN EXCELLENT, concise reference text. Diagnostic procedures, clinical syndromes, and present therapeutic measures are discussed.

Physiology and Biophysics of the Circulation

By Alan C. Burton, Ph.D., 217 pp., $8.50, Year Book Medical Publishers, 1965.

ALTHOUGH written for the student of physiology, this

continued page 196

BALDNESS FOLLOWING A SEVERE ILLNESS



Cases of alopecia areata or totalis have been aided by our wigs.

"My daughter's hair fell terribly after a fever and despite 'treatments' nothing happened, my M.D. suggested you. I find the hairpiece you made fits perfectly and looks so natural I am almost convinced it's real. My daughter's hair is growing back now."

THE HAIR CLINIC

Hawaii's Only Wigmakers

1724 Kalauokalani Way, Honolulu

(Across from Murphy Motors on Kapiolani)

Hrs. weekdays 10-5; Sat. 8:30-1. • Tel. 900-165 994-237

MEDICAL PLACEMENT BUREAU and NURSES' REGISTRY

24 HOUR SERVICE

LET US SERVE YOU IN YOUR NEED

Nurses, Staff and Office
Nurses, Private Duty
Nurses, Supervisors
Practical Nurses
Nurses, Aide
Dental Assistants
Physical Therapists
X-Ray Technicians
Laboratory Technicians
Medical Stenographers
Medical Clerks
Receptionists
Male Nurses
Bookkeepers
Home Companions

Frieda M. Beezley, R.N., *Director*
Patsy Harrison, *Secretary*

1473 South King St. **991-237**

Butazolidin® alka

ach capsule contains:

utazolidin, brand of henylbutazone	100 mg.
ried aluminum, ydroxide gel	100 mg.
agnesium trisilicate	150 mg.
omatropine ethylbromide	1.25 mg.

n painful shoulder



Geigy

herapeutic Effects
he acute phase of subdeltoid bursitis, ndinitis and associated periarticular flammation usually responds promptly and ramatically to phenylbutazone. Pain and nderness may be relieved within 24-48 ours and mobility of the affected arm uickly restored. Full recovery is frequently chieved within 7-10 days so that therapy is enerally of short duration. Calcific deposits re not specifically affected by treatment, ut their presence does not appear to retard ymptomatic improvement.

henylbutazone has not replaced physio- herapy, x-ray treatment, or local injections f hydrocortisone in the more chronic condi- ons, but it may advantageously be com- ined with these measures.

ontraindications
dema, danger of cardiac decompensation; istory or symptoms of peptic ulcer; renal, epatic or cardiac damage; history of drug llergy; history of blood dyscrasia. Because f the increased possibility of toxic reac- ons, the drug should not be given when the atient is senile, or when other potent chem- therapeutic agents are given concurrently. arge doses of Butazolidin alka are con- raindicated in patients with glaucoma.

recautions
efore prescribing, the physician should btain a detailed history and perform a com- lete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Adverse Reactions
The most common adverse reactions are nausea, edema and drug rash. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Average Dosage
Initially, give 400 mg. daily (one capsule q.i.d), reducing this, if possible, when a favorable therapeutic effect has been obtained. If after one week there has been no response, discontinue the drug. Butazolidin alka contains antacids and an antispasmodic to minimize gastric upset.

Note: The physician should be fully aware of dosage, precautions, adverse reactions, and contraindications as contained in the complete prescribing information.

Also available:
Butazolidin®
brand of phenylbutazone
Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

BU 4010P

text should be of value to the practicing physician who wishes to refresh his basic concepts in circulation.

★Ciba Foundation Symposium on Cardiomyopathies

Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., F.R.C.P., and Maeve O'Conner, B.A., 428 pp., $12.50, Little, Brown and Company, 1964.

THE USUAL Ciba format, of articles and lively discussions, on a subject of the utmost importance to cardiologists and some importance to all who concern themselves with heart disease.

★Early History of the Ochsner Medical Center The First Twenty-Two Years

By Guy A. Caldwell, M.D., 115 pp., $4.75, Charles C. Thomas, 1965.

THE PERFECT GIFT for a man who trained there. Fascinating story of one of America's—which means the world's—great clinics. Well illustrated.

The Physiology of Blood Platelets

By Aaron J. Marcus, M.D., and Marjorie B. Zucker, Ph.D., 162 pp., $7.00, Grune & Stratton, 1965.

HEMATOLOGISTS cannot afford to miss this one; pretty "high-power objective" for the average practitioner, however.

Functional Human Anatomy

By James E. Crouch, 662 pp., $9.50, Lea & Febiger, 1965.

A TEXT for premedical students, nurses, and allied medical personnel.

The Advance of the Fungi

By E. C. Large, 488 pp., $2.25, Dover Publishers, 1963.

THIS PAPERBACK edition is an interesting historical presentation of the effects of the fungi on man's food supply and the efforts utilized to combat them.

Animals Parasitic in Man

By Geoffrey Lapage, 320 pp., $1.85, Dover Publishers, 1965.

A PAPERBACK edition on parasites, for lay and medical personnel.

Basic Physiology and Anatomy

By Norman Burke Taylor, M.D., in collaboration with Margaret G. Phedran, 648 pp., $6.95, G. P. Putnam's Sons, 1965.

A SIMPLIFIED text written primarily for student nurses.

Auscultation of the Heart

By Bernard L. Segal, M.D., and William Likoff, M.D., 198 pp., $10.00, Grune & Stratton, 1965.

A BEAUTIFULLY prepared and printed volume, full of diagrams, aimed primarily at either a medical student or a budding cardiologist. The authors are at Hahnemann.

Current Psychiatric Therapies, Vol. V

Edited by Jules H. Masserman, M.D., 306 pp., $10.75, Grune & Stratton, 1965.

PSYCHIATRISTS will want to read this, of course; few others will.

Short-Term Psychotherapy

By Lewis R. Wolberg, M.D., with nine contributors, 348 pp., $9.75, Grune & Stratton, 1965.

ELEVEN ARTICLES on an attempt to speed psychotherapy and thus enable more persons to be cared for than is possible now. Not for nonpsychiatrists.

Comparative Hematology

By Warren Andrew, M.D., Ph.D., 188 pp., $22.75, Grune & Stratton, 1965.

ONE OF THE FEW reference texts for those interested in comparative hematology. It is well illustrated, with an extensive bibliography.

Cerebral Vascular Diseases Transactions of the fourth conference held under the Auspices of the American Neurological Association and the American Heart Association

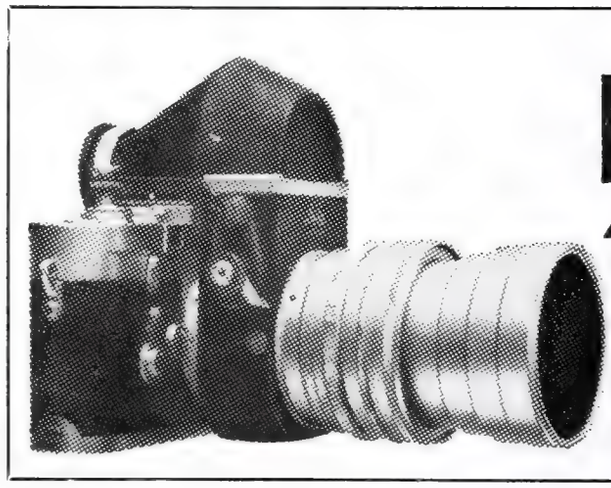
Editors Clark H. Millikan, Chairman, Robert G. Siekert, and Jack P. Whisnant, 276 pp., $6.50, Grune & Stratton, 1965.

INFORMATIVE articles and lively discussions which are reported verbatim, or better. The conference was held in January, 1965.

Ciba Foundation Study Group No. 19 Comparative Biochemistry of Arginine and Derivatives

In honour of Professor J. Roche, Edited by G. E. W. Wolstenholme, O.B.E., M.D., M.B., F.R.C.P., and Margaret P. Cameron, M.A., 101 pp., $2.95, Little, Brown and Company, 1965.

YOU remember, don't you? Arginine! There are prerequisites for reading this book; number one is knowing what arginine is. An invaluable reference work, of course, for those interested. ■



HAWAII CAMERA

1415 Kapiolani Boulevard, Honolulu, Hawaii
Telephone 995-321

Headquarters for

Medical Photo Equipment & Supplies

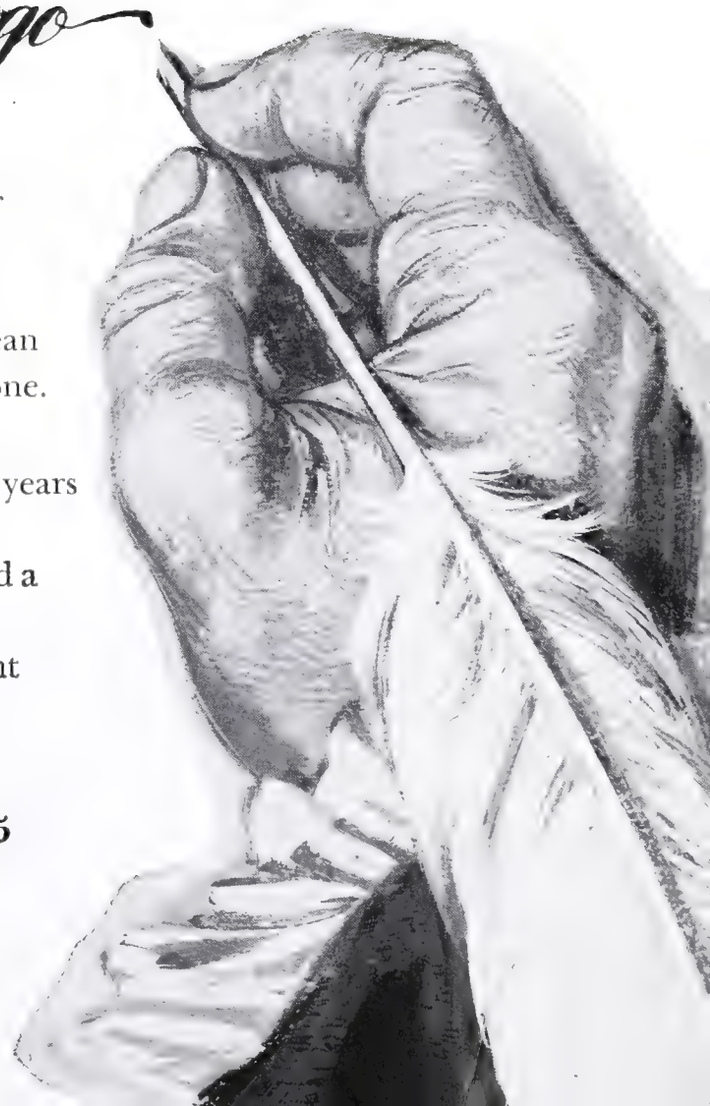
Serving Hawaii's Photographic Public for 20 Years

What is the single most important contribution to drug research?

It was made 175 years ago

when President Washington signed the first U.S. patent law. For patents mean drug progress. For example, of the 604 important drugs introduced worldwide since 1941, the majority originated in the U.S. drug industry. By contrast, a major west European nation, which has no patent protection, contributed one.

How great is the contribution of drug patents? The answer is told in life itself: our children live 10 years longer than we, and need not suffer polio, measles, diphtheria, tuberculosis, rheumatic heart disease, and a dozen other illnesses we grew up fearing. We can expect these benefits to multiply—as long as our patent system remains strong.



Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W. Washington, D.C. 20005

AIRKEM

So that we may better present the Airkem Environmental Health Program to the Medical and Hospital field, we are pleased to announce the addition to our staff as Hospital Representative . . .

MRS. JEAN ROLLER

(formerly Jean Grabner)

AIRKEM SALES & SERVICE-HAWAII, INC.

B. E. SCOTT, Mgr.

1358 No. King St. • Honolulu, Hawaii 96817 • Phone 815-112

Our "Angels"

	Page
Airkem Sales & Service-Hawaii, Inc.	198
Aloha Rent-Alls	190
American Factors, Ltd.	86
American Tobacco Co.	89
Ames Company, Inc.	199
Ayerst Laboratories	200
Bristol Laboratories	84, 85, 188, 189
Burroughs Wellcome & Co., U.S.A., Inc.	90, 193
Carnation Company	191
Coca-Cola Bottling Co. of Honolulu	176
Cutest Uniforms	190
Geigy Pharmaceuticals	77, 180, 181, 195
General Diagnostics	175
Hair Clinic	194
Hawaii Camera	196
Hawaii Medical Service Association	185
Hawaiian Airlines	184
Hawaiian Electric Co., Ltd.	178
Island Holidays	182
Kahanaola	75
Lederle Laboratories	186
Lilly, Eli, & Co.	73, 92
Mead Johnson Laboratories	87
Medical Placement Bureau	194
Newton, C. R.	192
O'Leary, Lydia, of Hawaii	182
Optical Dispensers of Hawaii, Inc.	176
Parke, Davis & Co.	74
Pharmaceutical Mfg. Assn.	197
Pitman-Moore Company	80-81
Professional Services	174
Robins, A. H., Co.	183
Roche Laboratories	91
Ross Laboratories	88
Schuman Carriage Co., Ltd.	187
Searle, G. D., & Co.	171
Smith, Kline & French	179
Star-Bulletin Printing Co.	192
Ti Root Okolehao	177
Wallace Laboratories	82, 83
Williams Mortuary	198
Winthrop Laboratories	79

WILLIAMS MORTUARY

"CHAPEL OF THE CHIMES"

1076 S. Beretania St., Phone 52-587 **Ample Parking Adjoining Mortuary**

OVER A CENTURY OF SERVICE

"Service measured not by gold but by the Golden Rule"

MEMBER

National Selected Morticians, National Funeral Directors Association,
Order of the Golden Rule, Hawaii Funeral Directors Association

January-February, 1966

HAWAII MEDICAL JOURNAL

U.C. MEDICAL CENTER LIBRARY
FEB
San Francisco 22

GIVE



For Your Heart's Sake

Iron deficiency is effectively treated with Zentinic®

tinic is an oral multifactor hematinic in Pulvule® form. ■ It offers efficient tment of iron deficiency in patients with menorrhagia, pregnant patients depleted iron stores, and adolescent patients with erratic eating habits plicated by the onset of menstruation and rapid growth. ■ The Zentinic ula contains 100 mg. of elemental iron as ferrous fumarate and 200 mg. tamin C to aid absorption of the iron by helping to maintain it in the fer- state. ■ In addition, the B complex vitamins are included for general itional support.

500232

Zentinic® Lilly

Multifactor Hematinic with Vitamins

In this issue

Ancient Hawaiian Medicine

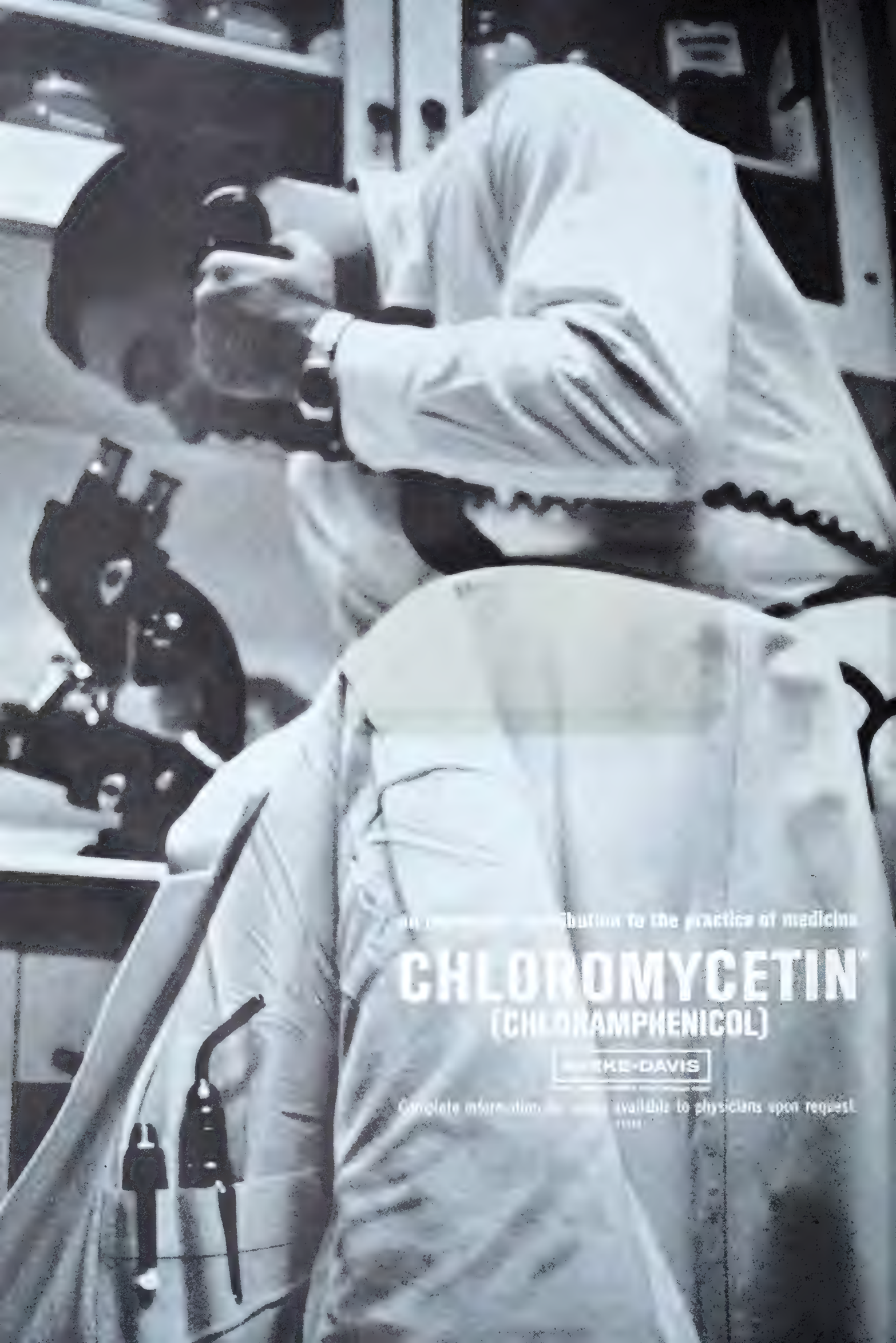
The Honolulu Heart Program

Table of Contents, page 206

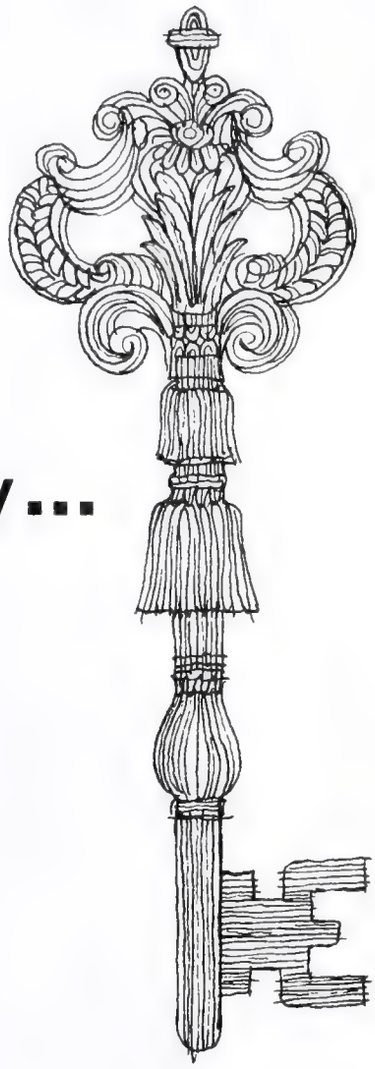
Hawaii Calendar, page 279

Reports & Snorts, page 216

VOLUME 25 • NUMBER 3


bution to the practice of medicine
CHLOROMYCETIN®
(CHLORAMPHENICOL)
KE-DAVIS
Complete information ... available to physicians upon request

Still have some old, out-dated ideas tucked away...



...in your Will?

■ Probably the most important document you ever signed is your will. It's one document you shouldn't ever put away and forget. Changes in your family (or in your family fortunes) can out-date it — and out-dated, it can defeat its own purpose. Call your attorney and review your will with him. What's more important to read today?

BISHOP TRUST COMPANY

Trust Services Exclusively

BISHOP AND KING STREETS · PHONE 563-771 ■



Did you know that, in Hawaii, a non-resident cannot serve as executor of your Will? For a free copy of a new booklet "Will the State of Hawaii Draw Your Will?" visit our offices at Bishop & King Streets, write us at P. O. Box 2390, Honolulu, Hawaii 96804, or call 563-771.

HAWAII MEDICAL JOURNAL

Published Bi-Monthly by the HAWAII MEDICAL ASSOCIATION (Incorporated in 1856 under the Monarchy), 510 S. Beretania St., Honolulu, Hawaii 96813 • *Editor,* HARRY L. ARNOLD, JR., M.D. • *Assistant Editor,* DORIS R. JASINSKI, M.D. • *News Editor,* HENRY N. YOKOYAMA, M.D. • *Managing Editor,* LEE MCCASLIN

VOLUME 25, NUMBER 3 • JANUARY-FEBRUARY, 1966 • $6.00 A YEAR, $1.00 A COPY

The JOURNAL may not be held responsible for opinions expressed in papers, discussions, communications, or advertisements. The advertising policy of the HAWAII MEDICAL JOURNAL is governed by the rules of the Council on Drugs of the American Medical Association. The right is reserved to reject material submitted for editorial or advertising columns. All material for publication must be in the hands of the editor on or before the 10th day of the month preceding publication date. Reprints of original articles will be supplied at actual cost, provided request is attached to manuscript or made in sufficient time before publication. A reasonable number of cuts and illustrations accompanying an article will be accepted for printing. The right is reserved to ask the author to bear cost of these when it is found necessary to do so.

Copyright, 1966, by the Hawaii Medical Association, Honolulu, Hawaii. Entered as second class matter, October 17, 1941, at the Post Office in Honolulu, Hawaii, under the Act of August 24, 1912. Office of Publication: Mabel L. Smyth Memorial Building, 510 S. Beretania St., Honolulu, Hawaii 96813.

The Hawaii Medical Association

Officers 1965-1966

President • O. D. PINKERTON, *Honolulu*
President-Elect • THEODORE T. TOMITA, *Honolulu*
Past President • SAMUEL D. ALLISON, *Honolulu*
Secretary • RANDAL A. NISHIJIMA, *Honolulu*
Treasurer • HERBERT Y. H. CHINN, *Honolulu*

County Presidents

Hawaii County • ED B. HELMS, *Hilo*
Honolulu County • JOHN J. LOWREY, *Honolulu*
Kauai County • Y. MIYASHIRO, *Waimea*
Maui County • KENNETH HALING, *Kahului*

Delegate to A.M.A. • RICHARD D. MOORE, *Honolulu*
Alt. Delegate to A.M.A. • GEORGE H. MILLS, *Honolulu*

Councillors 1965-1966

Maui • JOSEPH E. ANDREWS
Honolulu • GEORGE H. BATTEN
Honolulu • BERNARD W. D. FONG
Honolulu • ANDREW C. IVY, JR.
Hawaii • ROBERT M. MIYAMOTO
Kauai • BURT O. WADE

Officers—County Societies—1966

HAWAII		HONOLULU
ED B. HELMS •	President	• JOHN J. LOWREY
ETTA WRIGHT BEST •	Vice President	• GEORGE H. MILLS
CHARLES H. BELCHER •	Secretary	• KEITH F. O. KUHLMAN
PAUL CALDWELL •	Treasurer	• HERBERT Y. H. CHINN

KAUAI		MAUI
Y. MIYASHIRO •	President	• KENNETH HALING
SAMUEL WALLIS •	Vice President	• BILLIE FERN STROTHER
JOHN DE LA SALLE MORRIS •	Secretary / Treasurer	• SAKAE UEHARA

WHEN THIS RINGS . . . WE JUMP!



It's one thing to represent the world's finest drug lines, but it's quite another to deliver when the need is urgent. We're proud that we can cover both bases; we do represent the world's finest drug lines, and we provide special delivery service to Hawaii's medical profession as well as normal same-day delivery plus scheduled Rural deliveries. Give us a ring, and we'll jump to it.

AMERICAN FACTORS LIMITED

DRUG DEPARTMENT

667 Pohukaina Street

Phone 585-531 between 7:30 a.m. & 4:30 p.m. weekdays



Charles Malang
MANAGER



Johnny Kawafuchi
Sales Manager



Kenny Hills
Salesman—Oahu



Frankie Fernandez
Salesman—Oahu



Hideo Kawabata
Salesman—Oahu



Bill Lindsey
Salesman—Oahu



Masaaki Sasaki
General Sales
—Hawaii



Yoriyoshi Hara
Salesman—Hawaii



Christine Oga
Inside Sales
—Oahu



Edna Sato
Inside Sales
—Oahu



Doris Uyeda
Inside Sales
—Oahu



Elizabeth Azevedo
Inside Sales
—Oahu



George Pereira
Buyer



Eileen Brenessel
Secretary



Charlie Freitas
Warehouseman



Donald Hangai
Warehouseman



Hans Yoshino
Warehouseman



Shiro Sodetani
Warehouseman

Arbrook
Amaron Drug Co.
Ames Co., Inc.
Alcon Laboratories
Allergan Pharmaceutical
Astra Pharm. Products, Inc.
Ayerst Laboratories, Inc.
Bard-Parker
Barnes-Hind Laboratories
Becton-Dickinson & Company
Beutlich, Inc.
Bristol Laboratories
Brockway Glass Company
Burroughs Wellcome & Co.
Ciba Pharmaceutical Prod., Inc.
Dalton, Edward
Davis & Geck Sutures
Drug Package Inc.

Eastman Kodak
Eaton Laboratories
Endo Laboratories
Ethicon Inc.
Hynson, Westcott, Dunning
Johnson & Johnson
Kirkman Pharmacal Company
Lederle Laboratories
Mallinckrodt
McNeil Laboratories
Mead-Johnson & Company
Merrell, William S.
Milex Products
Minnesota Mining & Mfg.
Obergfel
Organon, Inc.
Ortho Pharmaceutical Corp.
Pacific Paper Products

Pfizer Laboratories
Ray-O-Vac Company
Riker Laboratories, Inc.
A. H. Robins Co., Inc.
Roche Laboratories
J. B. Roerig & Company
Sauter Laboratories
Schering Corp.
The Scholl Mfg. Co., Inc.
Searle & Co., G. D.
Smith, Kline & French Lab.
Stanlabs, Inc.
Strong Cobb Arner
Tampax Inc.
Tidi Products
Travenol—Hilo
Vestal Laboratories, Inc.
Wallace Laboratories

Warner-Chilcott Lab.
Warren-Teed Pharmaceuticals
Westwood Pharmaceuticals
Winthrop Products, Inc.

- **APPLICATORS**
- **DESENEX**
- **DRUG ENVELOPES**
- **ETHER**
- **LYSOL**
- **MAZON**
- **OINTMENT TINS**
- **OSYL**
- **Rx BOTTLES**
- **Rx FILES**
- **PILL BOXES**
- **TONGUE BLADES**
- **X-RAY FILMS AND SUPPLIES**

HAWAII MEDICAL JOURNAL

Contents

Volume 25, Number 3, January-February, 1966

Articles

Evaluation of the Effectiveness of Ancient Hawaiian Medicine 223
F. L. Tabrah, M.D., and B. M. Eveleth, M.D.

Epidemiological Aspects of Coronary Heart Disease and Cerebrovascular Disease: The Honolulu Heart Program 231
James C. Trombold, M.D., Robert C. Moellering, Jr., M.C., and Abraham Kagan, M.D.

Coronary Disease and Hypertension in Hawaii: Racial Distribution in 1,167 Men 235
Joseph Stokes, III, M.D., David R. Bassett, M.D., Gerald Rosenblatt, M.D., Donald Greenberg, B.A., and Robert C. Moellering, Jr., M.D.

Editorials

HMSA and the Doctors 244

Features

Book Reviews 248

Bureau of Medical Economics 247

County Society Reports 252

Hawaii Academy of General Practice 249

Hawaii Calendar 279

Hawaii Medical Association 253

In Memoriam—Doctors of Hawaii—LVIX 246

New Members 250

Notes and News 254

President's Page 241

Reports & Snorts 216

This Is What's New! 245

Hawaii Technologists' Bulletin

A Report from Vietnam 260

Announcing
EUTRON™
pargyline hydrochloride 25 mg. and methyclothiazide 5 mg.

for control of moderate to severe hypertension

Unique combination produces greater antihypertensive effect with lower doses

Eutron is the combination in a single tablet of 25 mg. Eutonyl (pargyline hydrochloride) and 5 mg. Enduron (methyclothiazide). This combination produces greater therapeutic effect than that of either component used alone. Side effects may be milder, too, as dosages are generally lower. The effective dosage is usually one tablet, once daily. Tablets are scored for greater dosage flexibility.



Each Eutron tablet contains two proven antihypertensives in the ratio shown to be most effective in most patients.

TM—TRADEMARK



BP reductions in the recumbent and sitting positions often are nearly as great as in the standing. In clinical trials, the average *recumbent* BP reduction was 36/18 mm. Hg.



The average *standing* reduction in clinical trials was 45/22 mm. Hg. Thus the difference between the standing and recumbent readings was only 9/4 mm. Hg.

Significantly lowers blood pressure in all body positions; less likelihood of orthostatic hypotension

In clinical trials, the average reduction in standing blood pressure was 45/22 mm. Hg.; in the sitting position it was 48/20 mm. Hg.; and in the recumbent position, 36/18 mm. Hg.

Because Eutron effectively reduces blood pressure in all body positions, there is reduced likelihood of orthostatic symptoms or hypotension.

This was reflected in the relatively mild character of side effects seen in clinical trials (see below).

Smooth and gradual onset

Onset of antihypertensive action is usually quite smooth. Initial reduction of systolic and diastolic readings is usually seen within a week — maximum reduction in seven to ten days.



Less troublesome side effects may be seen; frequent improvement in "sense of well-being"

Fewer than 1% of patients studied discontinued Eutron therapy because of side effects. This is due in part to the relatively low dosage needed with the combination. Usual recommended dose is one tablet daily—that is, 25 mg. Eutonyl with 5 mg. Enduron. ***This is about half the usual therapeutic dose of Eutonyl given alone.*** As a consequence side effects may be milder. And, as with Eutonyl given alone, the patient may well note an increased sense of well being. This is in distinct contrast to most other antihypertensive therapy.

ABBOTT

New **EUTRON** extends your range of treatment in moderate to severe hypertension



A single product you can use even in the presence of congestive heart failure or edema

Eight out of 10 patients respond

In clinical trials, Eutron produced normotension or a significant reduction in blood pressure in eight out of 10 patients studied. The rationale for the product is this: Eutonyl used alone is a potent antihypertensive. Its antihypertensive action is markedly enhanced by Enduron, a potassium-sparing thiazide.[1,2,3] The combination (Eutron) thus produces greater antihypertensive effect with lower dosages of the Eutonyl component, and milder side effects may be seen.

512214

1. Torosdag, S., Schvartz, N., Fletcher, L., Fertig, H., Schwartz, M. S., Quan, R. F. B., and Bryant, J. M., Pargyline Hydrochloride as an Antihypertensive Agent With and Without A Thiazide, Am. J. Cardiol., 12:822, Dec., 1963.

2. Pollack, P. J., Pargyline Hydrochloride and Methyclothiazide Combined In The Treatment of Hypertension, Cur. Thera. Res., 7:10, Jan., 1965.

3. Bryant, J. M. et al., Antihypertensive Properties of Pargyline Hydrochloride, New Non-Hydrazine Monoamine Oxidase Inhibitor Compared with Sulphonamide Diuretics, J.A.M.A., 178; 406, Oct., 1961.

Prescribing information for **EUTRON**

INDICATIONS: Eutron (pargyline hydrochloride and methyclothiazide) is indicated in the treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. It is not recommended for use in patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone.

CONTRAINDICATIONS: Eutron is contraindicated in patients with pheochromocytoma, advanced renal disease, paranoid schizophrenia and hyperthyroidism. Until further experience is gained it cannot be recommended for use in patients with malignant hypertension, children (under 12 years of age), or pregnant patients.

The concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. A drug-free interval of two weeks should separate therapy and use of these agents.

WARNINGS: Pargyline hydrochloride is a monoamine oxidase inhibitor. Patients should be warned against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When it is necessary to administer alcohol, narcotics (notably meperidine), antihistamines, anesthetics, barbiturates and other hypnotics, sedatives, tranquilizers, or caffeine, these agents can be used cautiously at a dosage of ¼ to ⅕ the usual amount. Avoid parenteral administration where possible. Withdraw pargyline two weeks before elective surgery.

Patients should be warned about the possibility of postural orthostatic hypotension. Those with angina or other evidence of coronary disease should not increase physical activity. Pargyline may lower blood sugar. Potassium depletion is unlikely at the recommended dosage, but if it occurs, adjust dosage or withdraw or provide added natural food sources of potassium; potassium tablets should be avoided wherever possible, as bleeding or obstructive ulceration of the small bowel has been associated with their use; potassium levels should be especially watched if the patient is on digitalis or steroids, or if hepatic coma is impending.

PRECAUTIONS: When determining the antihypertensive effect of Eutron, blood pressure should be measured while the patient is *standing*. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Pargyline has not been shown to cause damage to body organs or systems. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. The drug should be used with caution in patients with liver dysfunction. With prolonged therapy, examine patients for change in color perception, visual fields, and fundi.

Elevated blood urea nitrogen, serum uric acid or blood sugar are possibilities attributable to the methyclothiazide in Eutron. Methyclothiazide may also reduce arterial response to pressor amines. Blood dyscrasias, including thrombocytopemia with purpura, agranulocytosis and aplastic anemia, have been seen with thiazide drugs.

SIDE EFFECTS: The use of pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extra-pyramidal symptoms have been reported. Drug fever is extremely rare. Congestive heart failure has been reported in a few patients with reduced cardiac reserve. Nocturia has been observed with the combination. If side effects persist, despite symptomatic therapy or reduction of the dose, discontinue the drug.

ABBOTT

512214

ONLY 20 MINUTES FROM
DOWNTOWN HONOLULU . . .

KAHANAOLA

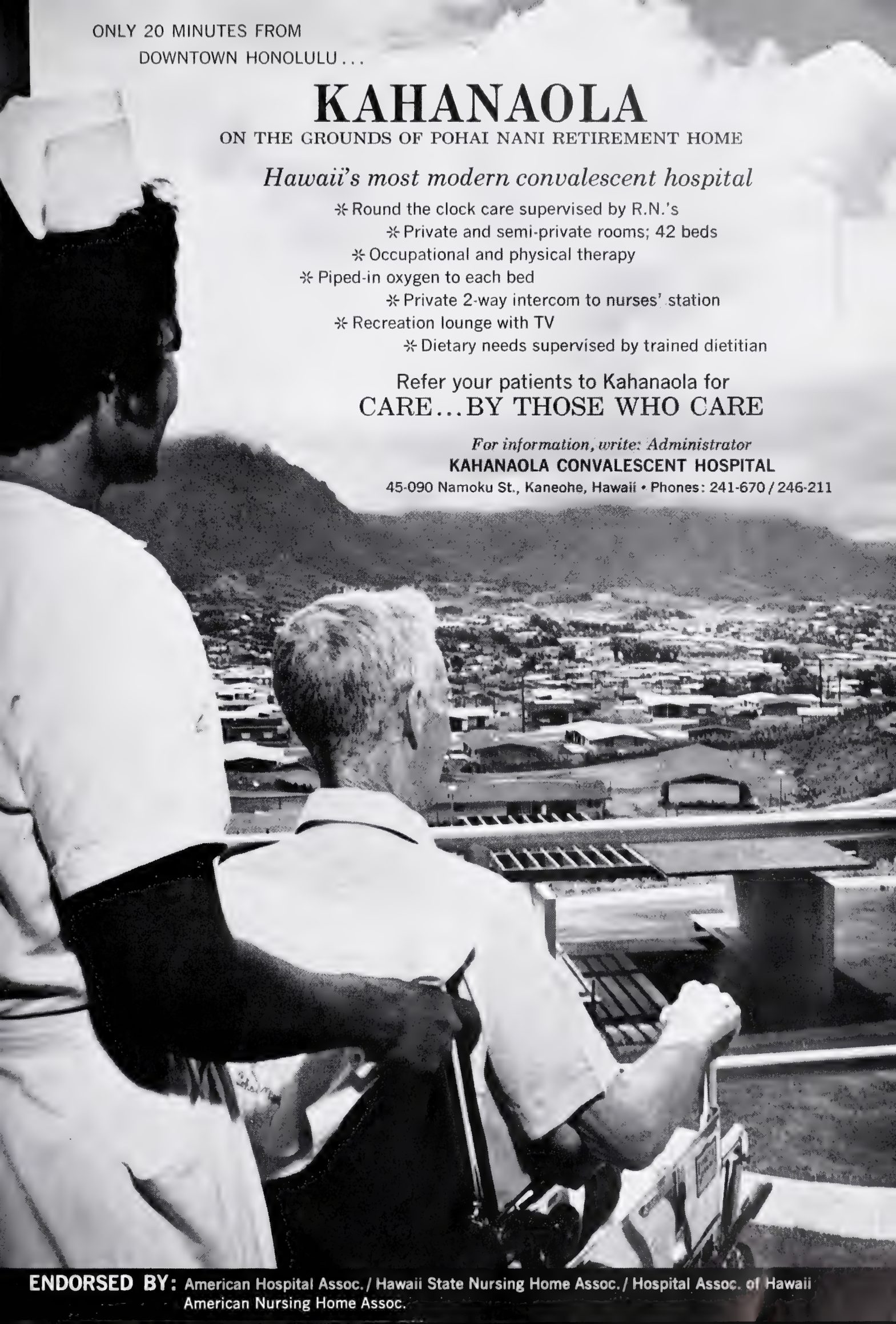
ON THE GROUNDS OF POHAI NANI RETIREMENT HOME

Hawaii's most modern convalescent hospital

- Round the clock care supervised by R.N.'s
- Private and semi-private rooms; 42 beds
- Occupational and physical therapy
- Piped-in oxygen to each bed
- Private 2-way intercom to nurses' station
- Recreation lounge with TV
- Dietary needs supervised by trained dietitian

Refer your patients to Kahanaola for
CARE...BY THOSE WHO CARE

For information, write: Administrator
KAHANAOLA CONVALESCENT HOSPITAL
45-090 Namoku St., Kaneohe, Hawaii • Phones: 241-670 / 246-211



ENDORSED BY: American Hospital Assoc. / Hawaii State Nursing Home Assoc. / Hospital Assoc. of Hawaii
American Nursing Home Assoc.



And now

or all you cold sufferers who've been looking for a cure-all.

hey can't cure a cold. We can't cure a cold. You can't cure a cold. But what you can do is relieve the symptoms, aking the patient comfortable and the cold bearable.

he patient suffering from head cold congestion, for instance, should breathe easier when you prescribe ovahistine LP.

ovahistine LP is a long-acting decongestant that helps restore normal mucus secretion and ciliary activity—physiogic mechanisms which prevent infection of the respiratory tract. Two tablets in the morning and two in the evening ill provide around-the-clock relief by helping to keep congested air passages clear, thus enabling your cold patient enjoy normal and free breathing.

se cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Tell atients who operate machinery or motor vehicles at drowsiness may result.

ach Novahistine LP tablet contains: phenylehrine hydrochloride, 25 mg., and chlorpheniramine aleate, 4 mg.

ITMAN-MOORE
vision of The Dow Chemical Company, Indianapolis, U.S.A.

DOW

NOVAHISTINE® LP

For relief of nasal congestion.




Here, where you most expect success, your penicillin can fail. Why?

Increasing evidence shows that penicillin-destroying staph may often co-exist with other primary pathogens and can cause your penicillin to fail.[1–3]

For example, investigators studying strep infections found that "...nose and throat cultures all consistently indicated a higher carrier rate of resistant Staph. aureus strains among treatment failures as opposed to treatment successes."[1]

They conclude: "This study [reported in the New England Journal of Medicine] demonstrates a basis for chemotherapeutic failure when organisms assumed to be penicillin susceptible are associated with penicillin-resistant Staph. aureus...."[1]

Now–unlike penicillin V and G– new Tegopen eradicates all four: strep, pneumo, staph...plus resistant staph

new TegoPen

SODIUM CLOXACILLIN MONOHYDRATE

tonsillitis · otitis media · sinusitis · pharyngitis · bronchitis · pneumonitis

At a new low price–comparable to quality brands of penicillin V and G; approximately 33% less than erythromycin and triacetyloleandomycin.

Bristol Therapeutic Summary: For complete information, consult Official Package Circular. *Effectiveness:* Clinical experience with Tegopen has established it as an effective agent for the treatment of infections due to streptococci, pneumococci and staphylococci including penicillin G-resistant strains of the latter, against which it is particularly effective. *Side Effects:* Allergic manifestations (rashes, wheezing and sneezing, and eosinophilia) have been reported. As with any penicillin, an anaphylactoid response can occur. Gastrointestinal disturbances (nausea, epigastric distress, flatulence and loose stools) have been noted in some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients, the significance of which is unknown. *Precautions:* Allergic responses may occur, particularly if there has been prior allergic sensitization to penicillin or other allergens. Superinfections with nonsusceptible organisms may occur during therapy. *Usual Dose:* Adults: 250 mg. *q.* 6 *h.* for mild to moderate infections. 500 mg. *q.* 6 *h.* for more severe infections. Children: 50 mg. per Kg. per day in equally divided doses at six-hour intervals. Children weighing more than 20 Kg. (44 lbs.) should be dosed according to adult recommendations. Beta-hemolytic streptococcal infections should be treated for at least 10 days to help prevent the development of rheumatic fever or glomerulonephritis. *References:* 1. Kundsin, R.B., and Miller, J.M.: New England J. Med. *271*:1395 (Dec. 31) 1964. 2. Michael, T.M.; Michael, J.G., and Massell, B.F.: Am. J. M. Sc. *248*:152 (Aug.) 1964. 3. Bernstein, S.H.; Stillerman, M., and Allerhand, J.: J. Lab. & Clin. Med. *63*:14 (Jan.) 1964.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York

Reports & Snorts

The FDA has a Bureau of Veterinary Medicine now.

• • •

Dr. Jack Millar, once of Tinian, now Chief of the Smallpox Unit at the Communicable Disease Center of the USPHS in Atlanta, doesn't share Dr. Kempe's views about smallpox vaccination. He is promoting a study of smallpox immunization levels in hospitals to protect the staff, who are at such high risk of exposure in ports of entry.

• • •

Syntex announces sale of "Norinyl-1" in Canada: 1 mgm of norethindrone and 0.05 mgm of mestranol.

• • •

Travenol offers a foolproof disposable plastic four-way stopcock in a sterile package. Direction of flow is shown instantly by the alignment of blue handle over white stopcock. Write to them in Morton Grove, Illinois.

• • •

Dopram (doxapram hydrochloride) is A. H. Robins's new high-potency injectable respiratory stimulant.

• • •

Michael-Lith Sales Corp. at 145 West 45th St. in New York will sell you a Michael Collator with a Gather-Magic Slide that will collate up to 15,000 sheets in a hour—up to 25 sets of 12 sheets each minute!

• • •

A new 100-bed community hospital in Mt. Pleasant, Pa., has no sterilizing units, no laundry, no dishwashing equipment. They don't need any: every instrument, dish, and piece of textile material is disposable, and is discarded after one use.

• • •

A five-year-old child who had never spoken a single word, but developed normally in other ways, remarked one morning at breakfast, "This oatmeal tastes bad." His mother was ecstatic with joy, of course. "Oh, darling," she exclaimed, "you can *talk!* How wonderful! We have been so worried because you didn't say anything! Why didn't you ever say anything before?" The lad considered the matter for a moment. "Well," he said, "up to now, everything was OK."

Ames Labstix plastic reagent strips permit instant testing of urine for occult blood (white tip turns blue in 30 seconds), acetoacetic acid and acetone (purple color in 15 seconds), glucose (red area turns purple), protein (yellow area turns green and then blue), and pH (orange at pH 5, yellowish at pH 6, greenish at pH 7, dark green at pH 8, blue at pH 9). You'll still have to examine the sediment by eye and microscope.

• • •

Need a four-legged cane? Hendrickson, Inc., 1330 Washington Ave. North, Minneapolis, Minnesota 55411, has two sizes.

• • •

Did you think a nasogastric tube was a Levine tube, or even a (you should excuse the expression) levine tube? It isn't. It's a Levin tube—named for a New Orleans physician.

• • •

Don't bet you know what the Bible says "goeth before a fall," because the odds are you think *pride* is what does this. It isn't. "Pride," says the good Book, "goeth before destruction, and a haughty spirit before a fall."

• • •

English is an unpredictable language. "Regarded" and "considered" are practically synonymous in most usages. Both can be, and usually are, followed with "as"—but "to be" can only be used after "considered," never after "regarded." "He was considered to be reliable" is O.K. "He was regarded to be reliable" is just not English. It isn't even American.

• • •

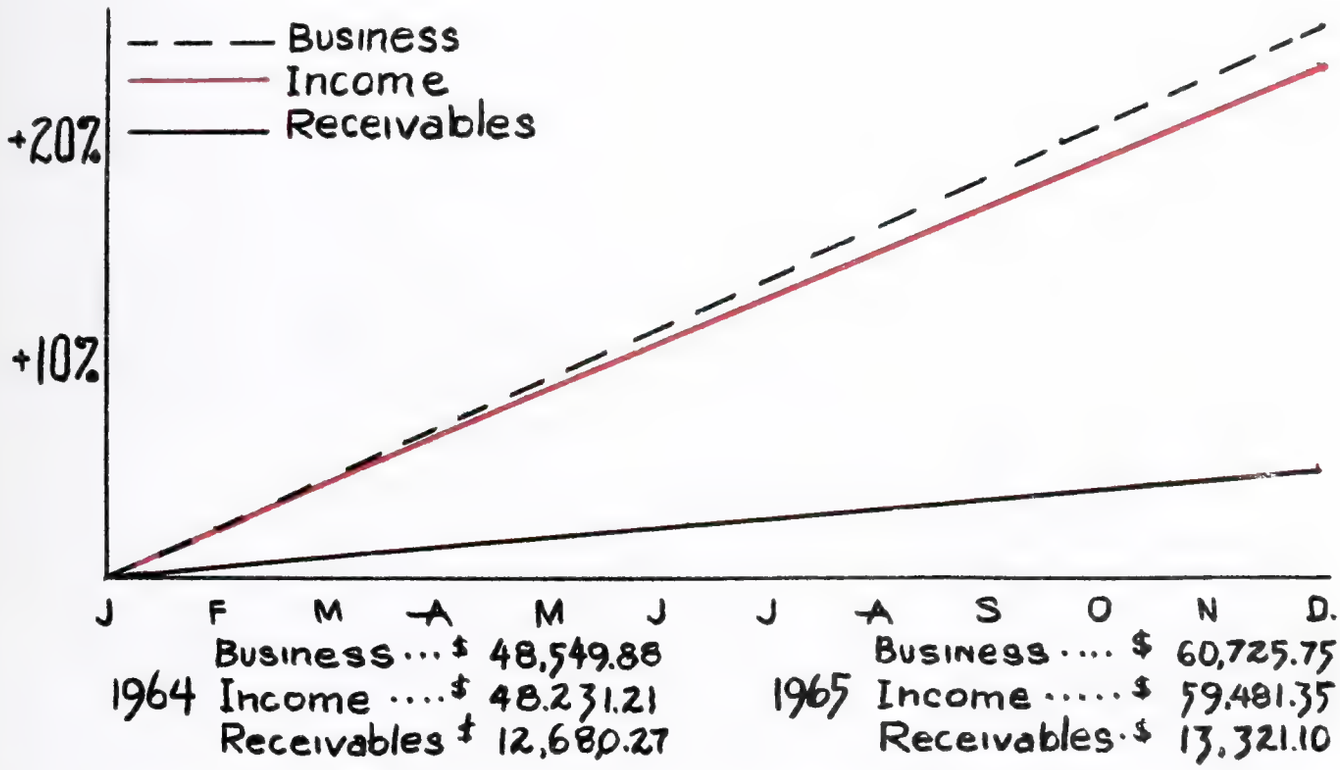
If anyone ever explains to you that the "green flash" at sunset is just a green after-image of the red sun, seen as it disappears, ask him how it happens (a) that it can be photographed, (b) that on Byrd's 1929 Antarctic expedition one green flash was observed for 35 minutes, or (c) that it may occur at sunrise, just for a fraction of a second before the sun appears. Father O'Connell of the Vatican Observatory, author of *The Green Flash and Other Low Sun Phenomena* (Interscience Publishers, 1958), believes it is due to scattering of violet and blue light and atmospheric absorption of red and yellow light. ■

WHY ARE MORE DOCTORS USING

"PROFESSIONAL SERVICES"?

INCREASED MONTHLY INCOME!

Typical Case History . . . Client Number 370, started service June, 1963



RESULTS:

Business increased	25%
Income increased	23%
Receivables increased	*only 5%*

Diagnosis of *your* present system is as close as your telephone . . .

CALL US NOW!

567-737

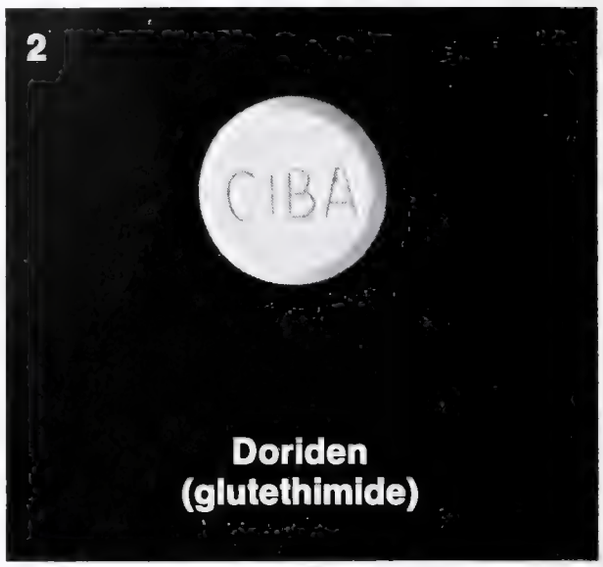
Professional Services

1350 So. King St., Honolulu

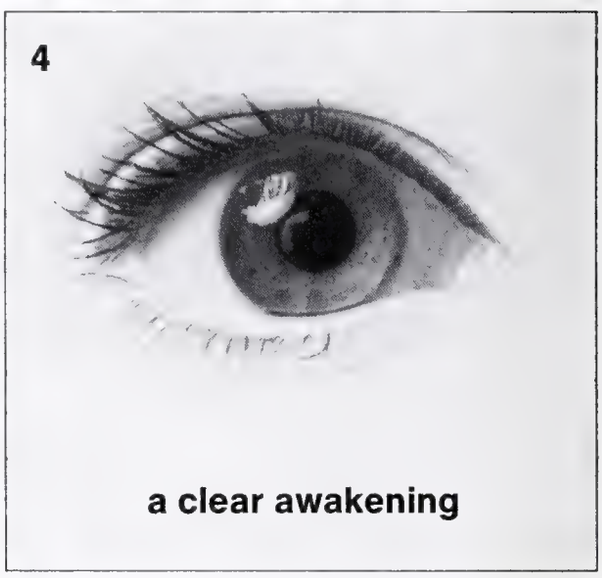
Personalized Services for Professional People is our Specialty

Sometimes the pressures of a job can cause insomnia... these same pressures can create extra demands for on-the-job alertness









Doriden®
(glutethimide CIBA)

INDICATIONS AND DOSAGE: *Insomnia*—0.5 Gm at bedtime. *Preoperative Sedation*—0.5 Gm the night before surgery; 0.5 to 1 Gm 1 hour before anesthesia. *Obstetric Sedation*—0.5 Gm at onset of labor. Continuing total daily dosage over 1 Gm is not recommended. CAUTION: Supervise dosage carefully, especially in patients with a known propensity for overdosing. Excessive and prolonged use in susceptible persons (*e.g.*, alcoholics, former addicts, severe psychoneurotics) may result in dependence and withdrawal reactions. In those cases, reduce dosage gradually to lessen the likelihood of withdrawal reactions such as nausea, abdominal discomfort, tremors, or convulsions. Newborns of mothers dependent on glutethimide may exhibit withdrawal symptoms. SIDE EFFECTS: Occasionally, a nonpruritic skin rash may occur; if so, withdraw drug. The rash usually clears spontaneously in 2 or 3 days. Occasionally nausea also occurs. Rarely, acute hypersensitivity reactions and blood dyscrasias have been associated with glutethimide therapy. SUPPLIED: *Tablets*, 0.5 Gm (white, scored) and 0.25 Gm (white, scored); bottles of 100, 500 and 1000. *Tablets*, 0.125 Gm (white); bottles of 100. *Capsules*, 0.5 Gm (blue and white); bottles of 100. *Consult complete literature before prescribing.*
CIBA Pharmaceutical Company, Summit, N.J.

C I B A

2/3348MBM-2

Now... even more compact and lower in cost



KODAK X-OMAT Processor, Model M5

Its size, its price, its performance reliability make it ideal

1. For single-unit installation in the smaller departments in hospitals; also in private offices and clinics where full- or part-time diagnostic service is provided.

2. For multiple-unit installations in the larger x-ray depts.

3. For supplementary installations in the central x-ray department such as "special procedures" rooms, gastrointestinal suites, etc.

4. For installations serving emergency, surgery, neurology, orthopedics, etc.

SIZE: The new Model M5 needs only 15 inches inside the darkroom—for the film-feeding station. (KODAK X-OMAT Film Feeder, Model 4—new in design—will be available as an accessory.)

Outside the darkroom it needs only 22½ inches of floor area 30 inches wide—less than 5 square feet.

CAPACITY: 70 sheets of film per hour, average of intermixed sheet-film sizes.

Processing cycle—dry to dry—8 minutes for an average-size film. Put-through rate, 10 inches per minute.

RELIABILITY: The new Model M5 uses the same time-tested mechanical principles and processing chemistry as other members of the KODAK X-OMAT Processor family. These, in combination with KODAK ROYAL BLUE and KODAK BLUE BRAND Medical X-ray Film, produce the superior radiographic quality that radiologists the world over have come to expect ever since the introduction of the KODAK X-OMAT Processing System seven years ago.

Note: KODAK X-OMAT Processors, Models M3 and M4A, are also available for installations requiring their greater processing capacity.

For further information, consult your KODAK X-OMAT Processor dealer, or write

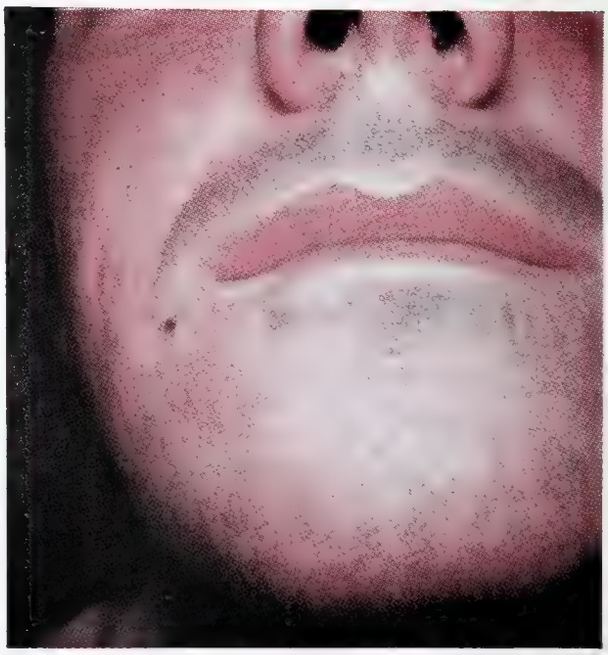
Eastman Kodak Company
X-Omat Center, Rochester, N.Y. 14650

TOPICAL TREATMENT

TYPICAL RESULTS



PRIMARY PYODERMA



AFTER TREATMENT WITH
'NEOSPORIN' ANTIBIOTIC OINTMENT
AND SALINE COMPRESSES

with 'NEOSPORIN'® brand

Polymyxin B-Neomycin-Bacitracin

ANTIBIOTIC OINTMENT

Each gram contains:

'Aerosporin'® brand Polymyxin B Sulfate 5,000 Units

Zinc Bacitracin 400 Units

Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) 5 mg.

Tubes of ½ oz. and 1 oz.

- clinically effective
- comprehensive bactericidal action against most Gram-negative and Gram-positive organisms, including Pseudomonas
- rarely sensitizes

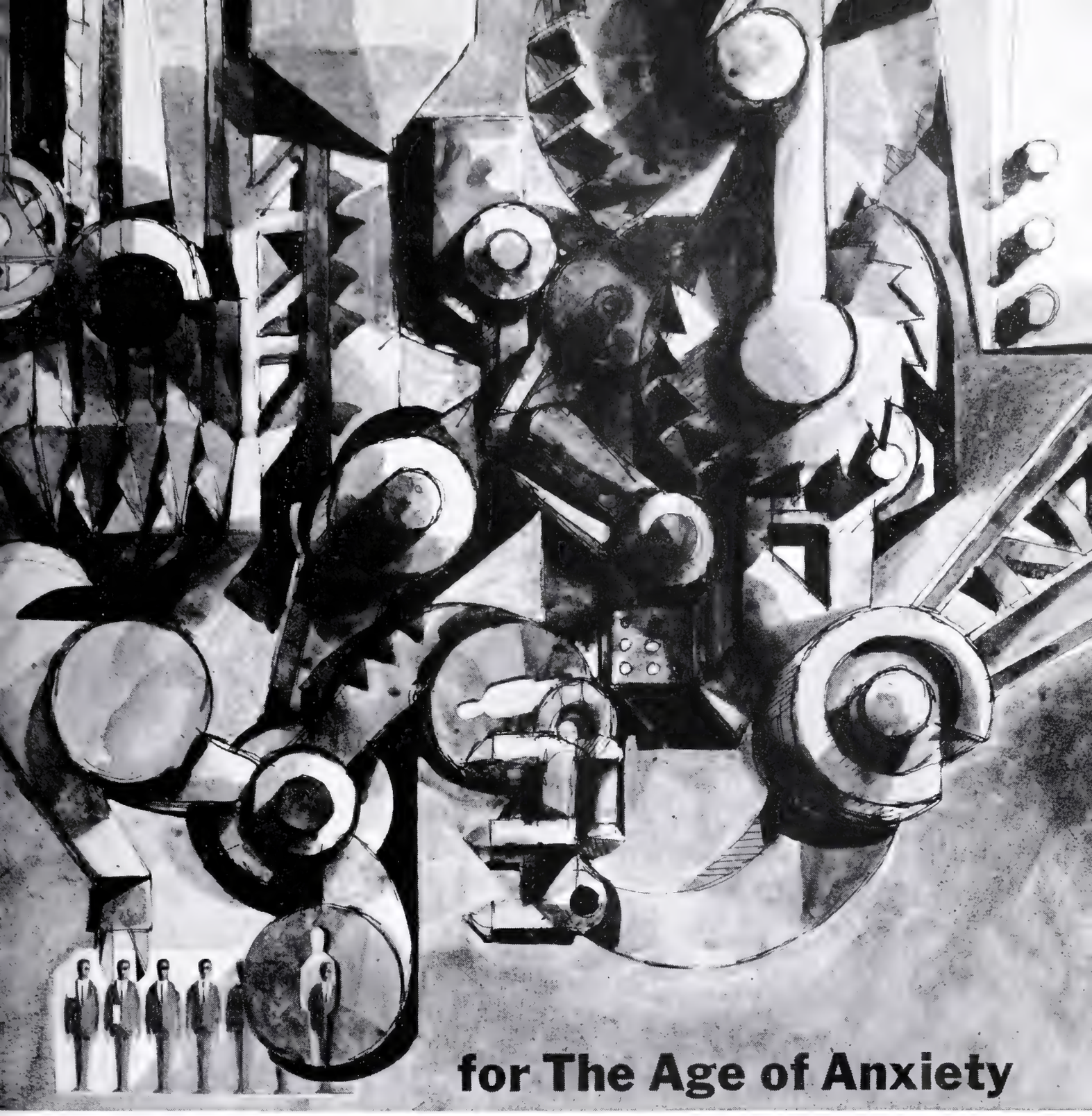
For the eradication of infectious organisms in a wide range of dermatologic disorders: impetigo, ecthyma, pyodermas, sycosis vulgaris, paronychia, traumatic lesions, eczema, herpes and seborrheic dermatitis. Prophylactically, for protection against bacterial contamination in burns, skin grafts, incisions and other clean lesions, abrasions and minor cuts and wounds.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

Contraindication: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York



For those who cannot cope realistically with the emotional turmoil and stress of modern living, the physician has at hand many valuable psychotherapeutic aids. One of the most useful is Librium, a pre-eminent prescription for excessive anxiety in this modern age.

ROCHE

LIBRIUM® (chlordiazepoxide HCl)

5 mg 10 mg 25 mg capsules in #50's

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. **Side Effects:** Side effects, usually dose-related, include drowsiness, ataxia, minor skin rashes, edema, menstrual irregularities, nausea and constipation. When treatment is protracted, blood counts and liver function tests are advisable. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined. **Precautions:** Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, in long-term treatment and in presence of depression or suicidal tendencies. Exercise caution in administering drug to addiction-prone patients or those who might increase dosage; withdrawal symptoms, similar to those seen with barbiturates or meprobamate, can occur upon abrupt cessation after prolonged overdosage. Caution should be exercised in prescribing any therapeutic agent for pregnant patients. **Supplied:** Capsules, 5 mg, 10 mg and 25 mg, bottles of 50.

Roche Laboratories • Division of Hoffmann-La Roche Inc • Nutley, N.J. 07110



Low host resistance?

Consider the "extra" antibacterial activity of Ilosone®

Occasionally, therapeutic failure is due to the patient's inability to mobilize his defenses sufficiently to overcome infection. Typical of this is the debilitated patient, the premature infant, or the diabetic. It is in these patients that the high levels of antimicrobial activity of Ilosone are especially useful. Ilosone has demonstrated antibacterial levels two to four times those of erythromycin base or stearate. Furthermore, it attains them earlier and maintains them longer. Even the presence of food does not appear to affect the activity of Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Dosage: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Ilosone®

Erythromycin Estolate

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana. 501280

Lilly

The Hawaiian kahuna had a pharmacopoeia—of sorts.
Of what *sorts has occupied the authors' attention.*

Evaluation of the Effectiveness of Ancient Hawaiian Medicine

F. L. TABRAH, M.D., and B. M. EVELETH, M.D., *Kohala, Hawaii*

• *Hawaiian* kahunas *were highly specialized experts with considerable skill in physical diagnosis and pharmacology. Several crude plant medicinals available to them have been studied and are discussed here, and further studies are underway in the hope of discovering some useful drug among them.*

ANCIENT HAWAIIAN medical knowledge is enjoying a sudden rebirth of interest. The Rauwolfia story in India, the success of the antibiotics, the unexpected periwinkle antimetabolites, and the firm status of the yam in corticosteroid production have helped spark a general revival of research on plant materials.

Scheuer, Swanholm, St. John,[1] Bushnell,[2] and others have published excellent papers on natural products found in Hawaiian plants. This report deals with a current study designed* to reassemble the ancient Hawaiian pharmacopoeia and screen it for physiologically active compounds.

The beginnings of Polynesian therapeutic knowledge lie in the dim legendary past, probably contemporary with the early Mediterranean civilizations. By 750 AD, perhaps even by 100 AD, the ethnic basis of Hawaiian medical knowledge had reached our islands. With faith in the curative powers of the great Hawaiian god Ku, and the goddess Hina, an elaborate practice of medicine developed, which flourished well into the missionary period.[3]

CLASSES OF KAHUNAS

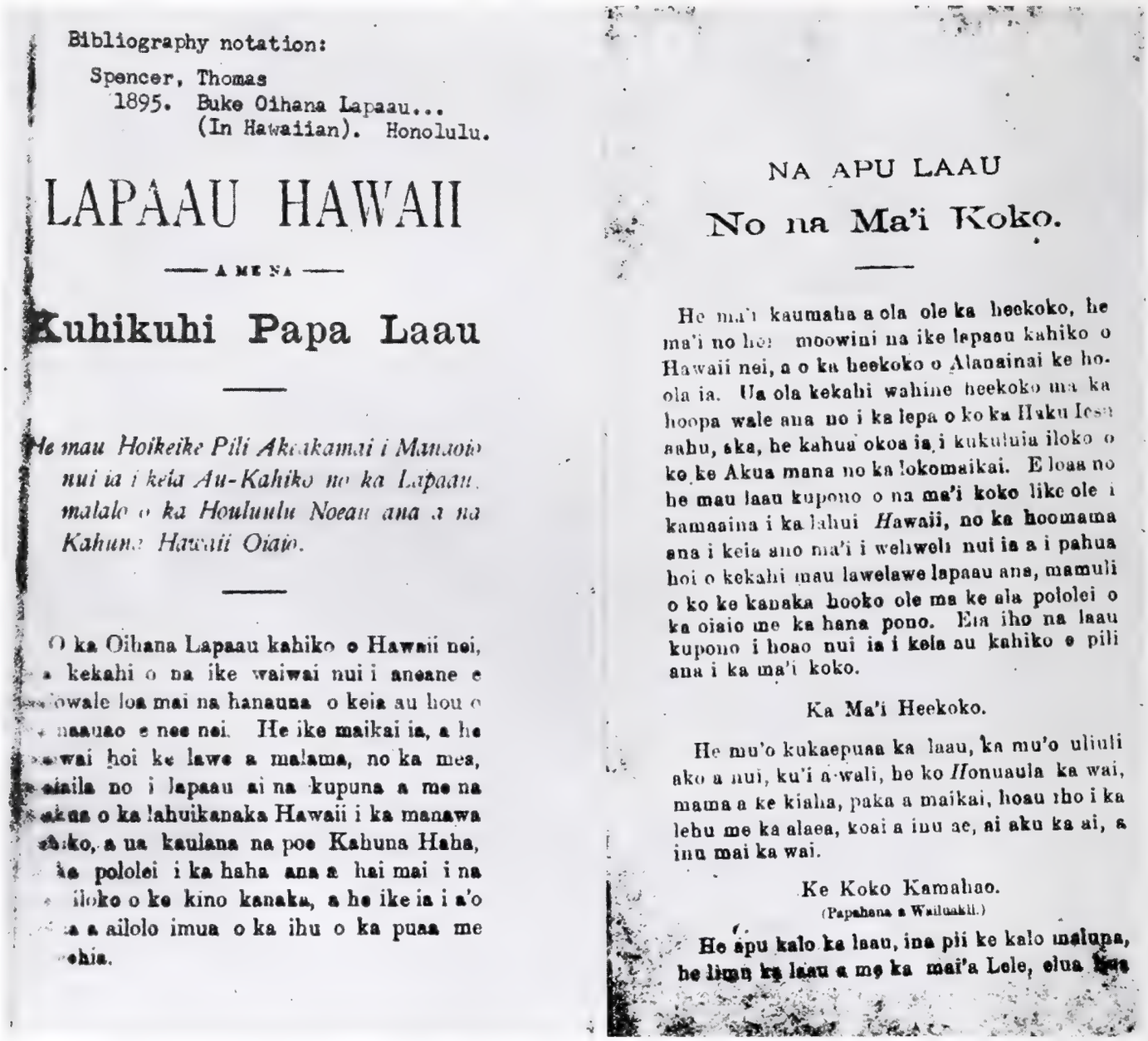
Ancient Hawaiian knowledge of medicine was *lapaau* was a skilled pharmacologist with about twenty years' training before practice.

Various medical *kahunas* had other skills. There was the pediatrician, *kahuna pa'ao'ao* or *kahuna* an oral tradition, unwritten so far as we know, handed down by the *kahuna lapaau,* the chief of staff of Hawaiian therapists. The old Hawaiian physicians were highly specialized. The *kahuna ea;* the obstetrician, *kahuna ho'ohapai keiki;* the diagnostician, *kahuna ha-ha;* and a half dozen others, including the dreaded *kahuna ana ana,* who could reportedly kill by hypnosis as well as cure disease by suggestion.

Much of our knowledge of ancient Hawaiian medicine has come down through the years by way of the early historians who tried to capture in writing the details of practice and belief before 1820. Recently published translations of Hawaiian manuscripts by Kamakau,[4] and other archival works,[5] have given us some idea of the old teachings and therapeutic methods (Fig. 1). Much has never been recorded and is vanishing, despite our efforts to talk with the oldest Hawaiians who only vaguely recall the medical practice of their grandparents, but who usually feel this very sacred cultural information should be given to investigators for its preservation. Fortunately our location in Kohala has given us close rapport with the more remote old people—something a study in a more developed area might not enjoy.

Among the hundreds of reported medicinals still used in early missionary times, there are intriguing reports of oral agents to prevent conception and others to enhance fertility. Labor was said to have been shortened by early oral induction with materials having smooth oxytocic effects, and we have found accounts by several writers who claim complete transference of labor pain from the mother

* Another publication in preparation will present the probable Hawaiian pharmacopoeia as recorded in early missionary times.



Bibliography notation:

Spencer, Thomas
1895. Buke Oihana Lapaau...
(In Hawaiian). Honolulu.

LAPAAU HAWAII

— A ME NA —

Kuhikuhi Papa Laau

He mau Hoikeike Pili Akaakamai i Manaoio nui ia i keia Au-Kahiko no ka Lapaau, malalo o ka Houluulu Noeau ana a na Kahuna Hawaii Oiaio.

O ka Oihana Lapaau kahiko o Hawaii nei, a kekahi o na ike waiwai nui i aneane e [illegible]owale loa mai na hanauna o keia au hou o [illegible]naauao e nee nei. He ike maikai ia, a he [illegible]waiwai hoi ke lawe a malama, no ka mea, [illegible]ainila no i lapaau ai na kupuna a me na [illegible]akua o ka lahuikanaka Hawaii i ka manawa [illegible]iko, a ua kaulana na poe Kahuna Haha, [illegible]ke pololei i ka haha ana a hai mai i na [illegible]iloko o ke kino kanaka, a he ike ia i a'o [illegible]a a ailolo imua o ka ihu o ka puaa me [illegible]ehia.

NA APU LAAU

No na Ma'i Koko.

He ma'i kaumaha a ola ole ka heekoko, he ma'i no hoi moowini na ike lapaau kahiko o Hawaii nei, a o ka heekoko o Alanainai ke hoola ia. Ua ola kekahi wahine heekoko ma ka hoopa wale ana no i ka lepa o ko ka Haku Iesu aahu, aka, he kahua okoa ia i kukuluia iloko o ke ke Akua mana no ka lokomaikai. E loaa no he mau laau kupono o na ma'i koko like ole i kamaaina i ka lahui *Hawaii*, no ka hoomama ana i keia ano ma'i i welowelo nui ia a i pahua hoi o kekahi mau lawelawe lapaau ana, mamuli o ko ke kanaka hooko ole ma ke ala pololei o ka oiaio me ka hana pono. Eia iho na laau kupono i hoao nui ia i keia au kahiko e pili ana i ka ma'i koko.

Ka Ma'i Heekoko.

He mu'o kukaepuaa ka laau, ka mu'o uliuli ako a nui, ku'i a wali, he ko *Honuaula* ka wai, mama a ke kiaha, paka a maikai, hoau iho i ka lehu me ka alaea, koai a inu ae, ai aku ka ai, a inu mai ka wai.

Ke Koko Kamahao.
(Papahana a Wailuaiki.)

He apu kalo ka laau, ina pii ke kalo maluna, he limu ka laau a me ka mai'a Lele, elua [illegible]

FIG. 1.—*Title page and heading of a chapter on bleeding and menstrual disorders in an old Hawaiian medical text.*

to the *kahuna* or others—including animals—probably by a hypnotic mechanism.

Diagnostic acumen was highest in the *kahuna ha-ha*. Skilful observations underlay the *kahuna ha-ha's* work. Accurate palpation was basic. This art of diagnosis is well described in the following passage from Kamakau:

> *Kahunas* of the *ha-ha* class sometimes made mistakes in diagnosing only with the fingers, but not so the expert. The class of *kahunas* who diagnosed by observation as well as palpation had greater skill and knowledge. When called to see a patient who lay between life and death, they could tell just by pressing a hand on the head, knowing at a glance whether there was heat in the head, pain in the back, if the feet were cold, the loins heavy—they would tell all the symptoms, and how long the patient had been ill, without previous information. The patient was astonished that the *kahuna* should know just how he felt, for usually the sick man would tell his symptoms to the *kahuna*, after which the *kahuna* would treat him.

This skill of observation was even exploited via runners and messages, the patient far from the *kahuna* but under proper treatment—truly the Hawaiian version of the telephone practice of today.

NATIVE PHARMACOPOEIA

We now think a fairly complex body of diagnostic knowledge was probably matched by a sophisticated pharmacopoeia—in fact, over 350 plants and other materials have been listed as remedies used by the *kahuna lapaau*. Many of these were probably specifics. The attempt at accuracy in the old system of medicine is well summed up in this quotation from Kamakau's pediatric comments of nearly 100 years ago:

> The remedy must be suitable for the ailment. It is not right just to fill the child with medicines. The ailments of children and young people must be studied and the proper remedies applied. Proper diagnosing



FIG. 2.—*Hawaiian Plant Index and Laboratory.*

by the *kahuna pa'ao'ao* and *kahuna 'ea* is by *observation, insight,* and *experience.*

With some chance of finding in the old Polynesian pharmacopoeia useful adjuncts to modern therapy, we have set out on a systematic search for pharmacologically active compounds among these plant medicinals. The odds are long, but it must be remembered that even now, in Western medicine, 60 per cent of prescriptions written are for naturally produced substances.

In attempting to reconstruct the Hawaiian pharmacopoeia, ethnic information from written history, and interviews with old Hawaiian people and those with strong Hawaiian cultural backgrounds, has been condensed and indexed to provide a working list of about 160 plants with reputed clinical usefulness. This index (Fig. 2) is being slowly revised as we work with it. It consists essentially of a wall-mounted panel about 20 by 9 feet, holding 160 envelopes in alphabetical order, listing the probable plants of the pharmacopoeia by their Hawaiian and various taxonomic names. Each envelope will contain a dried plant specimen; a color print of the fresh plant and keys to ethnic and chemical information, past and current, are filed separately in our laboratory.

PLANT INVESTIGATIONS

An index of plant families of known pharmaceutic interest suggests the need for special study of some plants. We have encountered many difficult taxonomic problems, but such is the general nature of plant names, particularly in Hawaii where the flora is not yet completely recorded.

Some plants may suggest antibacterial study, some antifungal checks, some antitumor or antiviral study. Offers to do antiviral and antitumor studies on our materials have been made, and some extracts have been submitted to Windsor Cutting, M.D., of the University of Hawaii Medical School.

In investigating plants with probable pharmacologic properties, our usual procedure is to macerate fresh plant material in 95 per cent ethanol (or other solvents) with a Waring Blendor, letting the resulting material stand with daily shaking for seven to ten days, after which the liquor is reduced under partial vacuum to a small residue which is redissolved in warm distilled water. This is further evaporated until a crystalline or gummy substance remains. After drying to constant weight, LD_{50} trials in mice establish cat or rabbit dosages for possible physiologic activity.



FIG. 3.—*Awa root, cleaned, ready for cutting and chewing.*

MANY SPECIMENS INACTIVE

In the extraction of our materials, the resulting products often show little or no pharmacologic activity. If the LD_{50}, for example, is several hundred or several thousand mg/kg, the extracted material is unlikely to merit further classical investigation as a systemic medication, but may still be of interest for more subtle activity such as antiviral or antifertility effects.

Our extracts are sent to the pharmacology department at the University of Hawaii for work we cannot undertake in Kohala, such as tissue culture studies. We are at present expanding the previous searches for alkaloids in Hawaiian plants by including material from our larger index of medicinals, and doing simple bioassays on likely extracts.

Our program has been in operation for about two years. To date we have spent most of our available time searching the literature, interviewing Hawaiian informants, and preparing our index and laboratory.

Recently we have reached a point in our work where publication of facts about some of the more interesting plant materials we have encountered seems advisable. Besides furthering interest in the medical heritage of the Hawaiian people, we hope that research efforts on local plant materials might be further stimulated.

KAWA DRINKING

Whenever Polynesian medicinals are discussed, the first question is usually about awa, or kawa, or kava.

Fig. 3 illustrates the root stock of this plant, Piper methysticum, the ceremonial drink of the South Pacific islands.

The drinking of kawa or awa has been popular for untold centuries as a prime act of celebration at religious and ceremonial occasions in the South Pacific. Today, the drinking of kawa is not confined to ceremonies. There is always a bowlful of kawa in the villages, and in many town offices. Most Indians as well as some Europeans enjoy its effects.[6]

Despite its almost universal appeal in olden times, awa is rarely used in Hawaii now. Classically it is prepared for drinking by having the root chewed and spit into a calabash, whence it is diluted with coconut water and strained. Traditionally, the chewing was done by several of the most comely village virgins. Since artificial maceration fails to produce the greatest pharmacologic effect (unless the root is thoroughly pounded), the difference apparently lies in the degree of grinding of the active resinous principle.

The effect of drinking 15 grams of rootstock in a half pint of water is to pleasantly paralyze, at the cord level, sensory transmission, then the innervation of striated musculature. A euphoric state

develops during which the mind remains clear; the drinker is tranquil and friendly, and refuses to be annoyed; and finally, if the dose is enough, sleep ensues. Several hours of dreamless sleep follow; the drinker awakes feeling marvelously well, and no hangover occurs.

Beside the drinking of awa for pleasure, it has been widely used in New Guinea during tattoo procedures as an anodyne, and we have other reports of its use by *kahunas* in controlling pain. Dr. Rudolf Hansel of Berlin worked here on the chemistry of awa, showing that several active awa ingredients share the structure in which an unsaturated lactose ring (Fig. 4) is probably re-

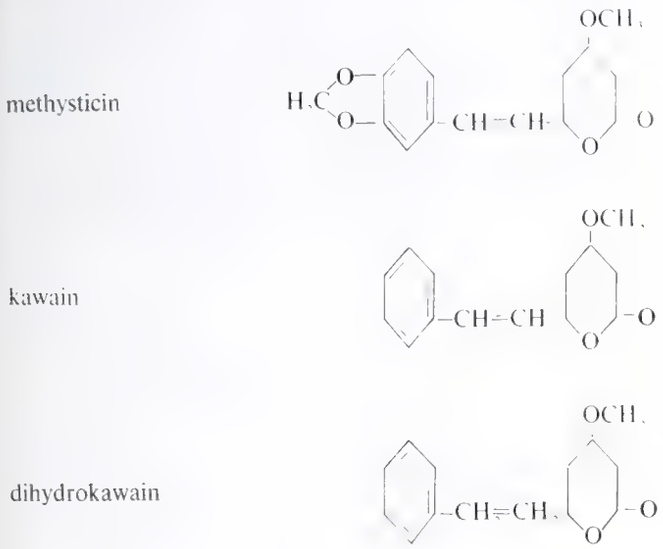


FIG. 4.—*Three of the active principles of awa.*

sponsible for some of its narcotic effect. Several of the kawa principles have been synthesized, but none exhibit the activity of whole-root extracts.

O'Hara[11] has recently found, in the steam distillate of awa, previously unknown components which possess CNS depressant and possibly ataractic activity.

Awa is used commercially at present as a bladder sedative. There is certainly a need for further clinical investigation of awa as an anodyne, muscle relaxant, and ataractic.

FISH POISONS

In olden times fishing was done by *hola,* or the distribution of fish poisons in shallow pools or bays.[7] Among the most potent fish poisoning plants was *auhuhu* or Tephrosia purpurea (Fig. 5).

Tephrosin, extracted from the whole plant, particularly the leaves, is a crystalline substance with a probable formula of $C_{23}H_{22}O_7$. It is lethal to fish at a dilution of 1:50,000,000. It appears to be innocuous to mammals orally, but is said by Stokes to have been used as a human poison. Recently,



FIG. 5.—*Auhuhu, or Tephrosia purpurea (from Degener).*

an old Hawaiian claimed his grandfather died within an hour after some prepared *auhuhu* had fallen from a shelf into his poi. We have been searching at length for this plant, and have only recently received specimens from near Naalehu, Hawaii. It appears to be a rarity in recent years, at least on this island.

According to Harry L. Arnold, Sr., tephrosin has an MLD of 10 mg/kg in rabbits and dogs, death being caused by respiratory paralysis.[8] Teph-

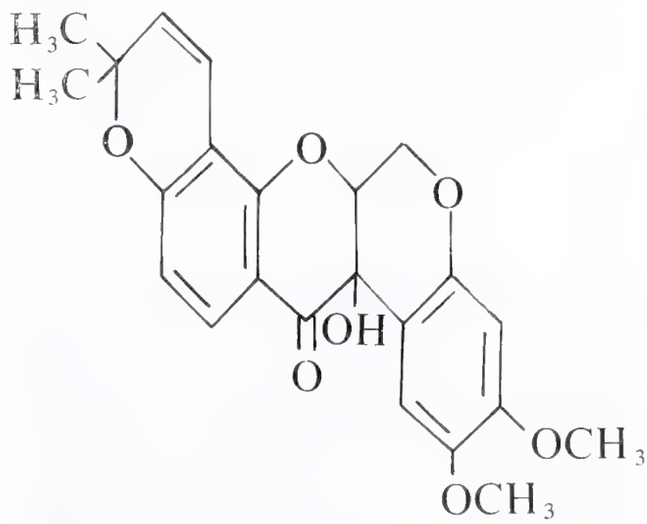


FIG. 6.—*Structure of tephrosin, active principle of auhuhu.*

none, which has an IP LD_{50} of 5 mg/kg in rats. Tephrosin is reported in the Merck Index (1960) to be only slightly toxic, if at all, to humans. These conflicting reports on toxicity in mammals suggest the need for further study of this interesting compound, particularly since rotenone inhibits glutamic acid oxidation and blocks electron transport at the diaphorase level in mitochondria. It may be a cardiac depressant.

We also have attempted some work with the plant known as *akia*—Wikstroemia (sp). This too was used as a fish poison. The plant was demonstrated to us by several Hawaiians who seemed reasonably certain of its fish-killing properties. Before attempting extraction, a simple assay on fish was done. Several freshly caught Tilapia about 15 cm long were divided between two one-gallon pails of pond water from which the fish were caught. About 200 grams of *akia* root, bark, leaves, stems, and ripe berries, were pounded to a pulpy mass and stirred into the water in one pail; the other was used as a control. After two hours, the *akia* treated fish were slightly sluggish, but seemed normally active on stimulation despite the fact that the fish were not even visible, so deeply stained was the water around them.

Further information on the Hawaiian *akias* suggests that there are probably 25 species here. It appears that the hola or fish poisoning variety remains to be catalogued with certainty.

A recent monograph[12] summarizing the botany and chemistry of *hola* plants in the Pacific area does not mention the *akias*. The well known *hola* plants fall into three groups:

1. Plants containing saponins: Barringtonia speciosa, Sapindus saponaria.
2. Plants containing rotenone or close relatives chemically: Derris elliptica, Derris uglinosa, Tephrosia purpurea.
3. Plants with undetermined active principle: Rhyncosia minima, Wikstroemia sp. (?).

We would appreciate receiving further knowledge about, or specimens of, any *akia* that might be the true *hola*, or fish poison plant in Hawaii.

HAWAIIAN POPPY

Among the over 50 Hawaiian plants that are reported to contain alkaloids, one indigenous plant, the Hawaiian poppy or *puakala*, Argemone glauca, has occupied us recently. (Fig. 7) Related to the opium poppy and a Mexican relative containing berberine, it must certainly contain these or related substances, since preliminary tests are all strongly positive for alkaloids.

This plant was a favorite with old Hawaiians for use in killing pain, both locally and systemically. Recent uses have included treatment of corneal opacities, conjunctivitis, and toothache, for which a plug, cut from the latex-laden root, is inserted into the offending cavity. It is said that beyond stopping the toothache, the tooth never aches again—suggesting that perhaps some permanent violence is done to nerve fibers. We are working on *puakala*. Extracted material is under study.



FIG. 7.—*Puakala, or Hawaiian Poppy. Rule 15 cm long.*

Administered intraperitoneally to mice, 750 mg/kg of the crude aqueous extract from the whole plant causes respiratory depression and a fitful fifteen-hour sleep from which the animal is easily aroused. The LD_{50} is about 780 mg/kg. Death occurs with a sudden dramatic convulsion after several hours of reduced respiratory rate. The chemical nature of the materials extracted and the mode of action are as yet unknown to us.

HINAHINA TEA

Hinahina, one of several *hinahinas*, probably Artemisia australis, is an old remedy that has long interested us. Growing on remote beach areas, this low husky plant is gathered, dried, and used as a rather concentrated tea, reportedly valuable for diabetes. Preliminary extracts, others have found, contain traces of alkaloids; the crude materials seem relatively nontoxic. No ill effects were found in mice given a single IP dose of 4,500 mg/kg of an alcohol-water extract. We are at present considering the possibility of activity such as blood sugar reduction or a diuretic effect that might explain its popularity.



FIG. 8.—*Noni, or Morinda citrifolia. Rule 15 cm long.*

At present we have begun a direct clinical study of the blood sugar levels of a diabetic under treatment with the usual water extract. Although it is too early to evaluate this extract for treatment of diabetes, we have encountered an unexpected bradycardia which seems to vary directly with the *hinahina* dosage in our subject. As more data are accumulated, the alkaloids, santonins, and pungent aromatic principles in this material may be of considerable interest to both pharmacologists and cosmetic manufacturers.

THE NONI APPLE

A favorite remedy among today's Hawaiians for "old age" is *noni,* or Morinda citrifolia (Fig. 8). This common wayside bush or small tree, growing widely in the tropical world, produces a large, yellow, edible fruit that somewhat resembles a hand grenade. The fruit is allowed to get rotten-ripe, mashed in a bowl, and kept in a cool place. Tablespoon doses of the juice are taken with meals. The juice smells like vomitus, and it is hard to understand how it can be taken straight. Its adherents hold it in great esteem for hypertension and the lassitude of old age. Quisumbing states the root bark contains morindin, a glucoside, and the fruit a volatile oil containing caprylic acid. Thirty-two medicinal uses are listed for *noni* in "Plants of the Philippines,"[9] most of them agreeing closely with various local usages from emmenagogues to antituberculosis treatment. Because of its wide medicinal popularity throughout its habitat, this plant may deserve further pharmacologic investigation.

MEDICINAL IRON

Not all the Hawaiian remedies were plant materials. A dozen or so materials from the sea and several minerals were also in use. Around house sites and deep in living caves we have found ancient balls of *alaea* which were crumbled into poi and eaten for anemia or following hemorrhage. This material is hematite, or Fe_2O_3. It was taken in fairly large amounts, probably sufficient to insure its effectiveness in elevating blood iron in deficiency anemias, despite its low absorption coefficient, probably about 10 per cent.[10]

Although scores of other interesting materials with reported medicinal activity are in our files, their real value becomes suspect by their great number. The burden of proof of the nonactivity of these ancient medicinals rests upon today's investigator, far removed in time from the deities Hina and Ku and the opportunity for direct clinical trials. Hence we must function as a pharmacologic devil's advocate.

The progress of this study to date is based on the generosity and cooperation of the Bishop Museum, and numerous individuals of the University of Hawaii, and the University of Washington, in Seattle, as well as the help of our many Polynesian friends and other informants who provide ethnic data and botanic guidance.

In April, May and June of this year, as a part of a very large natural products research program undertaken by the Pacific Biomedical Research Center of the University of Hawaii, our investigation of the medicinal materials of Hawaii was expanded by an island-hopping voyage to record native medicinal practices of Tahiti, Rapa, and Les Iles Sous Le Vent.

Since relatively little modern medical treatment is available in remote islands, the native medicinal practices are still in active use, as Hawaiian medicine was used here in missionary times. A preliminary library search here, and the cooperation of interested members of the Musée de Papeete in Tahiti, provided many interesting old articles in French describing the early medical practices of the Southeast Pacific area. In addition, it was possible on various islands to secure over 150 pages of ancient Tahitian recipes and indications which one of us (FLT) photocopied from old family notebooks. These remain to be translated from Tahitian to add to much direct information secured by interviews with French- or English-speaking Tahitians. This material will be the subject of a separate publication.

The similarity of flora and medicinal usage in French Polynesia and Hawaii is striking, raising

the question of what parts of our medicinal flora and therapeutic know-how may have come with the early voyagers from the Marquesas and Tahiti.

Further travel to investigate the native pharmacopoeia of the middle and western South Pacific is planned. Bits and pieces of information from Samoa, Tonga, New Guinea, and New Caledonia suggest an enormous knowledge of active natural medicinals in use in these older cultures.

Clearly this is a long and interesting search. Further receipt at any time of information about Polynesian medicinal practices and about reportedly toxic botanicals of the Pacific area will be most welcome.

A cordial invitation is extended to those interested in the pharmacology and chemistry of natural products, particularly of Hawaiian plant origin, to visit our laboratory in Kohala.

ADDENDUM

Since this article was submitted we have revised our extraction technique to a modification of the Raffauf procedure, with variations dependent upon the nature of the crude materials used. ■

REFERENCES

1. Swanholm, C. E., St. John, H., and Scheuer, P. J.: A survey for alkaloids in Hawaiian plants, part I, Pacif. Sci. 13:295 (July) 1959. Part II, 14:68 (Jan.) 1960.
 Scheuer, P. J., Horigan, L. P., and Hudgins, W. R.: A survey for alkaloids in Hawaiian plants, Part III, Pacif. Sci. 16:63 (Jan.) 1962.
 Scheuer, P. J., and Metzger, J. T. H.: Hawaiian plant studies. VI. The structure of holeinine, J. of Org. Chem. 26:3069 (Jan.) 1961.
 Werny, F., and Scheuer, P. J.: Hawaiian plant studies. IX. The alkaloids of platydesma campanulata mann, Tetrahedron 19:1293 (Aug.) 1963.
 Scheuer, P. J., Chang, M. Y., and Fukami, H., Hawaiian plant studies. X. The structure of mauiensine, J. Org. Chem. 28:2641 (Mar.) 1963.
2. Bushnell, O. A., Fukada, M., and Makinodan, T.: The antibacterial properties of some plants found in Hawaii, Pacif. Sci. 4:167 (July) 1950.
3. Larsen, N. P.: Rededication of the healing heiau keaiwa, annual report of Hawaiian Historical Society. 1951.
4. Kamakau, S. M.: Ka po'e kahiko. Bernice P. Bishop Museum Special Publication 51. 1954.
5. Handy, E. S. C., Pukui, M. K., and Livermore, K.: Outline of Hawaiian physical therapeutics, Bernice P. Bishop Museum Bull. 126. 1934.
 Pukui, M. K.: Beliefs and superstitions on birth, infancy, and childhood, original ms., property of Mrs. Dorothy Barrère, Honolulu.
 Spencer, Thomas: Buke Oihana Lapaau (1895) Honolulu.
 Akina, A., Kaaiakamanu, D. M.: Hawaiian herbs of medicinal value, Terr. Board of Health Bull., Honolulu. 1922.
6. Steinmetz, E. F.: Piper methysticum (Kava), Amsterdam, Netherlands. 1960.
7. Stokes, J. F. G.: Fish poisoning in the Hawaiian islands, Occasional Papers of the B. P. Bishop Museum, Honolulu 7:219, 1921.
8. Arnold, H. L., Sr.: Poisonous plants of Hawaii, Honolulu, Hawaii (1944).
9. Quisumbing, E.: Medicinal plants of the Philippines, Tech. Bull. 16, Rep. of the Philippines (1951).
10. Goodman and Gilman: The pharmacological basis of therapeutics, Second Ed. 1958.
11. O'Hara, M. J., Kinnard, W. J., and Buckley, J. P.: Preliminary characterization of aqueous extracts of piper methysticum Kava, Kawa Kawa), J. of Pharm. Sci. 54:1021 (July) 1965.
12. Petard, P. Les Plantes Ichtyotoxiques Polynésiennes, Bull. Soc. Études Océaniennes, 149:419 (Dec.) 1964.

HMA's 2d Interim Scientific Session

Coco Palms Hotel, Kauai

March 24-27, 1966

How the "American way of life" increases cardiac disease risk is under study.

Epidemiological Aspects of Coronary Heart Disease and Cerebrovascular Disease: The Honolulu Heart Program

JAMES C. TROMBOLD, M.D., ROBERT C. MOELLERING, JR., M.D., and ABRAHAM KAGAN, M.D., *Honolulu*

• *In the United States there has been an impressive increase in life expectancy at birth. Primarily because of the decrease in neonatal mortality and the decrease in mortality from infectious diseases, life expectancy at birth increased from about 48 years in 1900 to about 69 years by 1959. Most Americans have found these statistics quite encouraging. However, for the increasing millions of middle-aged and elderly persons in our population, life expectancy has improved only moderately since the turn of the century. Primarily because of coronary heart disease (CHD), life expectancy for 40-year-old white males increased only 3.8 years between 1900 and 1959.*[1]

ACCORDING to the President's Commission on Heart Disease, Cancer, and Stroke, CHD, alone, accounted for over 545,000 deaths in 1963. Cerebrovascular disease and heart disease, together, accounted for over half the total deaths from all causes in 1963, the same two causes accounting for only one-seventh of total deaths in 1900. Particularly disturbing is the observation that heart disease affects many individuals who are still in the productive periods of their lives. For example, the Commission found that in 1963 approximately 250,000 individuals in the age group 25 to 64 suffered premature death from heart disease.[2]

In recent years, increasing research interest has been directed toward discovering causes of these diseases. An important part of this effort has been the adaptation of epidemiologic methods, used so successfully in the study of infectious diseases, to the study of cardiovascular diseases. In these studies, populations are studied in an attempt to discover individual characteristics and environmental factors that may be important in the pathogenesis of a particular disease. Of the several types of epidemiologic research, the prospective study has proved of particular value in the study of CHD. In this approach, individuals within a selected population are characterized, usually by interview and examination, and then followed over a period of time for occurrence of disease. This allows later correlation of disease incidence with specific individual characteristics, such as occupation, smoking habits, blood pressure, and serum cholesterol.

HIGH RISK FACTORS DISCOVERED

A good example of such an approach is the Framingham Heart Study, which has followed an adult population of about 5,000 individuals by means of biennial examinations since 1950.[3, 4] In ten years of follow-up, increased risk of developing clinical CHD was found to have a significant

Honolulu Heart Program, Honolulu, Hawaii, and the national Heart Institute, National Institutes of Health, United States Public Health Service, Bethesda, Md.

association with the following pre-existing characteristics: male sex, older age, elevated levels of serum cholesterol, elevated blood pressure, certain electrocardiographic abnormalities (intraventricular block, left ventricular hypertrophy, and nonspecific abnormalities), cigarette smoking, excess weight, and low pulmonary vital capacity.[5]

The presence of more than one high risk factor was found to increase greatly CHD risk. For example, those groups of individuals who had cholesterol levels above 250 mg% and systolic blood pressures above 160 mm Hg, and who smoked more than 20 cigarettes per day, were found to experience more than six times the expected CHD incidence.[5]

Other prospective studies in the U.S. have generally confirmed the findings of the Framingham Study.[6-9] Additional factors that have been related to CHD with less consistency are ethnic background, family history of cardiovascular disease, mesomorphic body build, personality type, occupation, and emotional stress.[10]

A major problem, which has handicapped most studies within U.S. populations, has been the lack of intrapopulation variability. For example, it has been difficult to study the influence of diet and physical exercise on CHD because little variation of these factors has been observed. Most Americans consume a diet relatively high in calories and saturated fat and they are relatively inactive physically. Comparative studies between different ethnic groups and geographically separated populations have proved quite valuable in evaluating such factors.

HEART DISEASE LOW IN JAPAN

International comparisons have repeatedly shown Caucasian Americans to have a high incidence of CHD and Japanese in Japan to have a relatively low incidence of CHD. Ueda, using 1960 statistics, found the mortality rate from arteriosclerotic and degenerative heart disease in Japan to be about one-fifth that of the U.S.[11] Yano and Ueda determined the prevalence of CHD among approximately 5,000 individuals in Hiroshima and found it to be about one-fourth that observed in the Framingham Study in the U.S.[12] Comparative pathology studies in the U.S. and Japan have shown that coronary atherosclerosis generally has its onset about two decades later and progresses more slowly in Japan.[13] Thus, mortality, clinical, and autopsy studies have consistently shown impressive differences in the pattern of CHD between the two countries.

As early as 1950, Keys suggested that the low fat content of the average Japanese diet was related to the low circulatory death rate in Japan.[14] Subsequent observers have generally supported that diet hypothesis and repeated observations have shown low levels of serum cholesterol in Japan compared to the U.S.[12-17] However, the importance of diet and other environmental factors has remained difficult to assess because of the possibility that genetic differences between U.S. Caucasians and Japanese in Japan might be a significant factor underlying the observed CHD difference.

FAT INTAKE THE VILLAIN?

Therefore, observations of vascular disease among those of Japanese ancestry who have assumed different living habits in different environments such as Hawaii and the mainland U.S. have special significance. In 1957, Gordon reported that he found heart disease mortality rates to be relatively low among Japanese men in Japan, highest among Japanese men on the mainland U.S., and intermediate among Japanese men in Hawaii.[18] He found the converse for the cerebrovascular disease mortality rates—highest in Japan, lowest on the mainland U.S., and intermediate in Hawaii. Comparing studies of Japanese in Hawaii to similar studies in Japan, Larsen found a higher prevalence of clinical CHD and a higher prevalence of severe coronary atherosclerosis at autopsy among Japanese in Hawaii.[19] He concluded that Japanese heritage was not protective against CHD and that the increase among Japanese in Hawaii was related to the increased intake of fat in their diet.

In 1958, Keys and his associates reported their observations of diet, cholesterol levels, and CHD prevalence among men of Japanese ancestry in Japan, Hawaii, and Los Angeles.[20] They found that diets with increasing percentages of calories obtained as fat had a direct correlation with increasing levels of serum cholesterol and increasing CHD prevalence, all three being lowest in Japan, intermediate in Hawaii, and highest in Los Angeles. Of particular interest was the finding that their group of younger Japanese in Hawaii had high cholesterol levels similar to Caucasians of the same age in Minnesota.

In subsequent studies in Hawaii, Okazaki found high lipoprotein levels in 40 Japanese men (Nisei) of above average social status.[21] More recently, Adamson found diets of Japanese and Caucasian university students in Hawaii to be very similar, both groups obtaining about 40 per cent of their calories from fat sources.[22] In addition, using a microassay technique, she found the average cholesterol level of 175 Japanese men to be 257 mg% compared to 256 mg% for 81 Caucasian men.

INCREASING HEART DISEASE

Bennett *et al* reviewed death certificates in Hawaii, 1949 through 1956, and found Japanese

males to have low CHD mortality rates when compared to other ethnic groups in Hawaii.[23] However, more recent evidence suggests that CHD is increasing as a problem among Japanese males in Hawaii. In a ten-year survey of hospitalized cases of myocardial infarction on Oahu, a steady rise in incidence was found among Japanese males with the incidence in 1964 more than twice that in 1955.[24]

Thus, available evidence leads to several general observations: 1. that Japanese in Japan have low CHD rates compared to Caucasians in the U.S.; 2. that Japanese who live in Hawaii and the mainland U.S. have relatively high CHD rates compared to Japanese in Japan; 3. that among Japanese males in Hawaii, there has been an increasing incidence of CHD in recent years.

These reported differences suggest that closer observations of Japanese populations in Japan, Hawaii, and the mainland U.S. would offer a natural opportunity to study environmental influences related to cerebrovascular disease and CHD. In the previous studies most observers directed attention to changes in dietary habits but a comprehensive study of many environmental factors is needed. In addition, earlier observations used small population samples and varying methods of study and diagnosis in different areas. In order to reduce those inconsistencies and to take advantage of this natural opportunity to study environmental factors, parallel and cooperative studies are being carried out in Hiroshima, Japan, and on Oahu, Hawaii. A third cooperative study is being planned in California. The over-all purpose of these studies is to make standardized observations of personal characteristics, environmental factors, and disease incidence within these three Japanese populations which are geographically separated and are subject to different environmental influences.

THE HONOLULU HEART PROGRAM

The Honolulu Heart Program, the Hawaii phase of these cooperative studies, is a prospective study sponsored by the National Heart Institute. Planning and early organization of the project took place during the early part of 1964.* The University of Hawaii School of Public Health identified and located the study population.† This population, numbering about 11,700, includes all men of Japanese ancestry currently living on Oahu who were born between January 1, 1900, and December 31, 1919, and who are known to be long-term residents of Hawaii.‡ The study plan is as follows:

(1) To characterize these men in terms of sociological background, personal living habits, and physical and laboratory measurements;
(2) To follow those initially free of cerebrovascular disease and CHD for subsequent occurrence of those diseases;
(3) To search within the Hawaii population for significant relationships between occurrence of these diseases and specific individual habits and characteristics; and, finally,
(4) To make direct comparisons of individual characteristics, living habits, incidence of clinical disease, and autopsy findings with parallel studies in Japan and California.

The study consists of three phases:

I. Questionnaire Survey

In January, 1965, questionnaires were mailed to all those in the study population with the exception of about 500 individuals.§ By September 1, 1965, approximately 9,500 questionnaires had been returned. The purpose of the survey phase is to obtain baseline information on a high percentage of the study population.

Specifically, the information obtained from the survey questionnaire included: identification, birthplace, father's birthplace, marital history, education, occupation, physical activity, smoking history, weight history, 24-hour diet history, hospitalizations, medical history (heart disease, CVA, hypertension, diabetes, renal disease), and name of personal physician. In addition, the participant's permission to review any of his medical records was requested.

II. Interview and Examination

The interview-and-examination phase of the study began in October, 1965. The purpose of this phase is to observe directly each individual for the presence of cerebrovascular disease or CHD and to characterize him more precisely in terms of family and sociological background, certain personal habits, and physical and laboratory measurements. All those individuals within the questionnaire-respondent group (approximately 9,500) will be asked to take part in the interview and examination. Both the participating individual and his personal physician are notified when a physical or laboratory abnormality is detected which requires follow-up.

It is anticipated that this phase of the study will take about three years. The procedures carried out may be summarized as follows:

A. Interview

(1) Family history of the subject including his parents' birthplace and occupation, parents' present age or age at death and cause of death, and parents' history of any known cardiovascular-renal diseases or diabetes.
(2) Sociological history of the subject including his birthplace, sibling order, residence history, occupational history, marital history, housing situation, education, and religious preference.
(3) Personal history including smoking history,

* The Honolulu Heart Program received the endorsement of the Honolulu County Medical Society (March, 1964), the Hawaii Medical Association (April, 1964), and the State Department of Public Health (March, 1964).

† Robert M. Worth, M.D., Ph.D., directed this phase of the project.

‡ The 11,700 figure is an estimate; tabulation is not yet complete. This particular study group was selected because of its total size, sex, and age distribution (45 to 64 years at the beginning of the study). It is anticipated that a study population of this composition will develop enough cases of disease to allow statistically meaningful comparisons.

§ Slightly over 500 individuals officially within the study population were previously taking part in two epidemiological studies, the Hawaii Cardiovascular Study and a National Cancer Institute Study, Public Health Department, University of Hawaii. These individuals were included in the questionnaire survey at a later date.

dietary history (usual and previous 24 hours), drinking history, physical activity evaluation (using a typical 24-hour day), and weight at age 25.

(4) Past medical history of scarlet fever, thyroid disease, gout, other arthritis, diabetes mellitus, hypertension, cerebrovascular disease, renal disease, rheumatic fever, rheumatic heart disease, coronary heart disease, angina pectoris, and other heart disease.

(5) Current medical history of use of cardiovascular drugs and for symptoms of congestive heart failure, angina pectoris, myocardial infarction, intermittent claudication, and cerebrovascular disease. Information concerning previously taken electrocardiograms is recorded.

B. Measurements

(1) Physical measurements include weight, standing and sitting heights, chest depth, biacromial and bi-iliac diameters, force of hand grip, skinfold thickness, girth of upper arm, and blood pressure (three separate measurements).

(2) Tests performed include total and first second vital capacity, 13-lead electrocardiogram, urine analysis for glucose and protein, and hematocrit. Serum is examined for glucose (sample obtained one hour after a 50 gm. oral glucose load), uric acid, triglycerides, total cholesterol, and beta-lipoproteins (by paper electrophoresis method).

C. Physician Review

At the end of the interview and examination procedure, each individual is seen by a physician who reviews with the subject any interview findings suggesting cerebrovascular disease or CHD. The physician routinely determines the blood pressure and auscultates the heart. Additional physical examination is performed if indicated by the history. Finally, the physician reads the electrocardiogram and makes the final diagnosis of any apparent cerebrovascular disease or CHD.

III. Surveillance

The purpose of this phase of the study is to identify each individual case of cerebrovascular disease or CHD which develops in the study population during the surveillance period. Tentatively, this surveillance program is planned for five to seven years and may be summarized as follows:

A. Surveillance for Incidence of Clinical Disease

(1) At all Oahu hospitals, records of those in the study population which have the sign-out diagnosis of any type of heart disease, CVA, or pulmonary embolus are reviewed.

(2) A record of all abnormal electrocardiograms taken on those in the study population is being maintained at the major hospitals. This aids in identifying additional CHD cases and in double checking the record room surveillance of CHD.

(3) Each individual in the questionnaire-respondent group will be contacted periodically to inquire about illnesses suggestive of cerebrovascular disease or CHD. In addition, information concerning any electrocardiograms taken will be obtained. This direct contact will allow further verification of the hospital surveillance and will also enable follow-up of outpatient electrocardiograms taken at the various clinics and physicians' offices.

B. Mortality Surveillance

State Health Department death certificates are periodically reviewed to compile information concerning cause of death on all deaths occurring within the entire study population of approximately 11,700. This will allow later comparison of mortality experience between respondents and nonrespondents in the study group.

Autopsy studies will also be an important part of the surveillance of disease experience in the study population. The Heart Program pathologist is notified when a postmortem is to be performed on a deceased member of the study population, regardless of cause of death. Whenever possible, the pathologist assists in those autopsies and examines for the presence of myocardial infarction and cerebral hemorrhage or infarction. In addition, the examination includes the observation and grading of the degree of atherosclerosis in the aorta, the coronary arteries, and the cerebral arteries. The same method of grading antherosclerosis is being used in the autopsy series in the Hiroshima study.

ANALYSIS OF DATA

When the study is completed, the information obtained will be analyzed in the following manner:

I. Internal Comparisons

Within the entire survey population of approximately 9,500 subjects, mortality and the incidence of clinical disease will be correlated with those items reported in the survey questionnaires. More precise correlations of disease incidence with observed characteristics will be made within the group which takes part in the interview and examination. Finally, in those subjects who expire and come to autopsy, confirmed diagnoses of cerebrovascular disease and CHD, as well as the measured degree of atherosclerosis, will be correlated with previously determined characteristics.

II. External Comparisons

An important feature of this project is that it is a cooperative study with the study in Hiroshima. Substantial agreement has been reached on standardization of methods of observation, and criteria for diagnosis are the same in the two studies. This will allow direct comparisons of specific factors between the two populations. For example, smoking habits, diet, distribution of blood pressure and cholesterol levels, and the prevalence of diabetes can be compared. In addition, it will be possible to compare directly the incidence of cerebrovascular disease and of CHD, as well as the severity of atherosclerosis observed at autopsy.

It is hoped that the internal comparisons will further illuminate factors which have important relationships to the development of cerebrovascular disease and CHD, and that the close observation of Japanese populations in these different environmental settings will reveal high risk factors associated with assuming the "American way of life." This search is important because environmental factors are, potentially, subject to our control. Studies such as this may lead us toward measures that will aid in the prevention of these diseases in the future. ■

References will appear in the authors' reprints.

This screening study confirms the general impression that Hawaiians have more hypertension and coronary disease than do Orientals.

Coronary Disease and Hypertension in Hawaii
Racial Distribution in 1,167 Men

JOSEPH STOKES, III, M.D.,* DAVID R. BASSETT, M.D.,†
GERALD ROSENBLATT, M.D.,‡ DONALD GREENBERG, B.A.,§
and ROBERT C. MOELLERING, JR., M.D.,¶ *Honolulu*

• *Among 1,167 men working for the City & County of Honolulu or the Hawaiian Telephone Company, 163 were found by screening studies to have reportable electrocardiographic findings. Six previously unrecognized myocardial infarctions were found, along with 15 previously unrecognized instances of left ventricular hypertrophy. Hawaiians and part-Hawaiians had nearly twice the prevalence of hypertension found in Japanese and Caucasians; Chinese had least of all. Cardiovascular screening procedures are evidently essential for estimating the prevalence of coronary disease in a population.*

MANY INDIVIDUALS with remediable disease are asymptomatic or otherwise unaware of their defects. These individuals can best be identified at the time of routine physical examination, or through the use of certain specific screening techniques. The principles of screening for heart disease, as clearly reviewed by Rutstein,[1] depend upon the reliability and validity of the screening test itself; the yield of previously unknown, remediable disease; and the cost and acceptability of the screening method. Electrocardiographic screening of different working, racial, and social groups has been reported by a number of workers.[2-6]

The Hawaii Cardiovascular Study was established in 1961 to determine reasons for the differences among Hawaii's races in mortality from coronary heart disease.[7] The design of that study called for the identification, by hospital record room search, of all Japanese and Hawaiian men, aged 35 to 64, who had survived a myocardial infarction.

Since it has been demonstrated that at least 20 per cent of myocardial infarcts may be asymptomatic or unrecognized,[8] an electrocardiographic screening study was undertaken in Honolulu during the summer of 1963, with support from the Hawaii State Department of Health in order to identify additional men in this age group with previously undetected coronary disease. Also included in this screening study was an evaluation of hypertension, a known high-risk factor in the development of coronary heart disease.[9]

METHODS

Sampling Techniques. Since the Hawaii Cardiovascular Study has selected for examination those racial groups in Hawaii with the highest and lowest mortality rates from coronary heart disease (Hawaiian and Japanese, respectively[7]), employees of the City and County of Honolulu and of the Hawaiian Telephone Company were chosen for the present study, since these organizations were known to employ a high percentage of men in these racial groups, particularly in the Hawaiian and part-Hawaiian groups. No attempt was made to

From the Hawaii Cardiovascular Study, The Queen's Hospital, Honolulu.

Acknowledgment is made of the financial support of the Department of Health, State of Hawaii, in carrying out this study. The Hawaii Cardiovascular Study is supported by grants from the National Heart Institute, USPHS, the Hawaii Heart Association, and the Daland Fund of the American Philosophical Society, and is conducted in cooperation with the Department of Health, State of Hawaii.

The authors also are indebted to the following for assistance with this study: Hawaii State Health Department, Chronic Disease Branch; Hawaii Heart Association; Anne Kauka, R.N.; Karen Quinn, Susan Hong, and Rebecca Gressitt, volunteer aides; Lois Schleif, R.N., Hawaiian Telephone Company; the Honorable Neal S. Blaisdell, Mayor, City and County of Honolulu; Daniel S. C. Liu, Chief of Police; William K. Blaisdell, Chief, Fire Department; Victor Givan, Assistant Managing Director, City and County of Honolulu.

* Dean, School of Medicine, University of California, San Diego; formerly Director, Hawaii Cardiovascular Study (HCVS).

† Director, HCVS.

‡ Present address: Quincy, Massachusetts; formerly Research Associate, HCVS.

§ Present address: Heart Disease Control Program, Division of Chronic Diseases, USPHS, Washington, D.C.; formerly Statistician, HCVS.

¶ Research Associate, HCVS.

TABLE 1.—*Ratio of Subjects Screened to Total Employed, Within Departments Chosen for Study.*

	AGE 44 AND UNDER	AGE 45-54	AGE 55 AND OVER	TOTAL
Total number employed in age ranges, in departments examined	1,400	1,071	401	2,872
Number screened	591	406	170	1,167
Percent of available population screened	42.2	37.9	42.4	40.6

screen either the entire population or a representative sample of the population in this age and sex group.

Table 1 indicates the potential number of employees who might have been screened in these working groups, and the number who volunteered and were actually screened in each of the age groups listed. Of the 2,872 potential subjects, 1,167 (40.6 per cent) were actually screened; 42.2 per cent were in age group 44 and under; 37.9 per cent in group aged 45-54, and 42.4 per cent in the group aged 55 and over.

Screening Techniques. Examining rooms were made available by the departments surveyed. Employees who agreed to undergo examination were permitted to leave work temporarily for this purpose. Each subject had a single, left-arm, sitting blood pressure taken at the beginning of the examination, using a mercury manometer, standard (12.5 x 23.0 cm) Tycos cuff, with the arm at table level. The subject filled out a simple questionnaire indicating the presence or absence of symptoms of, or knowledge about, hypertension and coronary heart disease, and indicating his smoking habits. An electrocardiogram was then recorded, using a Sanborn Visette electrocardiograph. Initially, standard leads I, II, and III, and precordial leads V_2, V_4, and V_6, were recorded. However, due to concern that certain valuable information was not being recorded, for the last 800 subjects AVR, AVL, AVF, and V_1 were recorded as well. The total time required for examination of each subject averaged 10-15 minutes.

Electrocardiograms were interpreted according to the criteria of the Framingham Study,[9] and the World Health Organization Expert Committee on Cardiovascular Diseases and Hypertension[10]; for electrocardiograms showing "T wave changes" or "borderline abnormalities," review and classification were made by the criteria of Blackburn *et al.*[11]

Following interpretation of the electrocardiogram, a card was sent to each subject indicating whether he should see a doctor as a result of the screening procedure. In each case where referral was indicated, a letter and the electrocardiographic tracing were sent to the subject's physician.

RESULTS

Table 2 presents the number of men screened by racial groups and by ten-year age ranges. Because

TABLE 2.—*Number of Men Screened by Race and Age.*

RACE OR ETHNIC GROUP	AGE					TOTAL	% OF TOTAL SCREENED BY RACE	% DISTRIBUTION OF TOTAL CIVILIAN POPULATION IN HAWAII (654,466 as of 1/1/64)
	34 and Under	*35-44*	*45-54*	*55-64*	*65 and Over*			
Japanese*	11	203	139	46	1	400	34.3	31.5
Filipino*	3	4	11	9		27	2.3	10.8
Chinese*	1	52	34	16		103	8.8	6.1
Caucasian*	6	74	68	32	3	183	15.7	32.0†
Hawaiian								
Pure		13	19	11		43	33.3	16.7
Part	7	181	112	43	3	346		
Other Races	1	35	23	6		65	5.6	2.9†
TOTAL	29	562	406	163	7	1,167	100.0	100.0

* Subjects listing only stated race; racial mixtures designated as "Other Races," except for "part-Hawaiian."
† Puerto Rican included with "Other Races" in these figures.

TABLE 3.—*Number of Subjects with Reportable Electrocardiographic Findings, by Race and Age.*

RACE OR ETHNIC GROUP	AGE: 34 & under		35-44		45-54		55-64		65 & over		TOTAL, BY RACIAL GRP.		NO. WITH MYOCARDIAL INFARCTION*	NO. WITH L.V.H.	NO. WITH T-WAVE CHANGES
	#	%	#	%	#	%	#	%	#	%	#	%			
Japanese	3	27.3	12	5.9	13	9.4	10	21.7	1	†	39	9.8	2	5	12
Filipino	0	. .	0		1		1	. . .	0		2	7.4	0	0	1
Chinese	0		7	13.5	5	14.7	6	37.5	0		18	17.5	3	1	10
Caucasian	1		7	9.5	15	22.1	10	31.2	1		34	18.6	2	4	18
Hawaiian															
Pure	0		1	7.7	3	15.8	4	36.4	0		8	18.6	0	1	3
Part	1		18	9.9	21	18.8	9	20.9	3		52	15.0	4	4	21
Other Races	0		6	17.1	4	17.4	0		0		10	15.4	1	0	4
TOTAL	5	17.2	51	9.1	62	15.3	40	24.5	5		163	14.0	12	15	69

* Number of cases with definite or "very probable" myocardial infarction (W.H.O. criteria[10]).
† Percentage not calculated because of small numbers.

of the heterogeneous racial and ethnic structure of the population groups in Hawaii, the following criteria have been used in designating racial-ethnic categories:

> Racial breakdown is given for "pure" racial groups (subject listing only one race) and for "part" racial groups. Subjects listing part-Hawaiian ancestry were designated such, except where percentage was specifically stated to be one-eighth Hawaiian or less. In cases in which race was indicated as one-eighth Hawaiian or less and no other race was mentioned, the subject was classified as "part Hawaiian." Other subjects who listed two or more racial groups are identified in the table as "other races." Caucasian includes Portuguese and Puerto Ricans; "other races" includes Korean, Samoan, and other races, and racial mixtures except part-Hawaiian.

It will be seen that this method favors the assignment of subjects to the "part-Hawaiian" group; this was done deliberately to permit analysis of a reasonable number of part-Hawaiian subjects, thereby serving as a baseline for the main Hawaii Cardiovascular Study. Unlike the main Hawaii Cardiovascular Study, subjects of Hawaiian-Japanese ancestry were included.

The percentage of the total subjects screened, by race, indicates that the proportion of Japanese (34.3 per cent) is similar to the proportion of Japanese in Hawaii as of January 1, 1964 (31.5 per cent).[12] The proportion of Hawaiians and part-Hawaiians screened (33.3 per cent) is twice the proportion (16.7 per cent) in the general population. As stated above, the selection of specific departments was made deliberately to allow study of a larger number of Hawaiian subjects.

Table 3 summarizes the number and per cent of subjects having one or more reportable electrocardiographic findings[11] by race and age. Of the 1,167 individuals screened, 163 (14.0 per cent) had one or more electrocardiographic findings. The prevalence of reportable findings was highest in Caucasians (18.6 per cent of those screened) and pure Hawaiians (18.6 per cent), with Chinese, part-Hawaiians, and Japanese having 17.5 per cent, 15.0 per cent, and 9.8 per cent of subjects, respectively, showing electrocardiographic findings. The percentage of findings generally increased with age, as expected. Too few subjects were screened in the Filipino and "other races" groups to permit valid conclusions, and no further comment on them will be made.

Table 3 also lists the numbers of subjects by racial group with electrocardiographic findings of myocardial infarction, left ventricular hypertrophy, and T-wave changes. With these data, prevalence of these abnormalities in the population studied could be calculated, though ratios derived must be considered tentative because of the small numbers involved, and because of nonrandom sampling.

The number and types of electrocardiographic findings are listed in Table 4. Findings are recorded as "known" if the individual recorded on his questionnaire any previous knowledge of heart disease. Of the twelve with "definite" or "very probable" myocardial infarctions (W.H.O. criteria[10]), only six were aware of their heart disease. Six of 1,167 (0.5 per cent) were thus found to have "silent infarctions." Of the total 388 Japanese ex-

TABLE 4.—*Number and Type of Electrocardiographic Findings.**

	ELECTROCARDIOGRAPHIC FINDING	KNOWN†	UNKNOWN	TOTAL	GROUP TOTAL
I.	Myocardial infarction:				
	anteroseptal	0	1	1	
	anterolateral	1	0	1	
	posterior	3	2	5	
	"very probable" (WHO criteria[10])	2	3	5	
	"possible" (WHO criteria [10])	0	4	4	16
	borderline EKG (1d=1; 2c=2; 3b=3; 3c=1)‡	1	6	7	7
II.	QRS axis deviation:				
	left axis —30° negative (1)‡	1	18	19	
	right axis +90° or greater	0	5	5	24
III.	Ventricular hypertrophy:				
	left	0	15	15	
	right	0	1	1	16
IV.	ST junction and segment changes:	0	0	0	0
V.	T-wave items:				
	(2)‡	0	2	2	
	(3)‡	3	64	67	69
VI.	A-V conduction:				
	PR greater than 0.21 sec. (3)‡	0	1	1	
	WPW (4)‡	0	2	2	3
VII.	Ventricular conduction:				
	complete RBBB (2)‡	0	5	5	
	incomplete RBBB(3)‡	0	4	4	
	intraventricular block (4)‡	0	2	2	11
VIII.	Arrhythmias:				
	premature atrial	0	3	3	
	premature ventricular (more than 4 in 40 complexes)	0	8	8	
	atrial fibrillation (3)‡	2	4	6	
	sinus tachycardia (7)‡	0	3	3	
	sinus bradycardia (8)‡	0	1	1	
	other (9)‡	1	2	3	24
IX.	Miscellaneous:				
	low QRS amplitude (1)‡	0	2	2	
	QRS slurring, etc. (3)‡	0	1	1	
	P-wave findings (5)‡	0	2	2	5
TOTAL		14	161	175	175

* One subject may have more than one finding (175 findings in 163 subjects).
† "Known" = answered "yes" to question, "Have you ever had a heart attack or been told you have heart disease?"
‡ Figure in parentheses refers to subgroup according to classification of Blackburn *et al.*[11]

amined in the age range 35 to 64,§ two (0.5 per cent) had evidence of myocardial infarctions; of the 379 pure and part-Hawaiians in the same age range, four (1.1 per cent) had evidence of myocardial infarctions. (The difference between these two proportions is not significant.) Of the 175 findings in the 163 subjects, 161 occurred in subjects who had no knowledge of any cardiac disorder. None of the subjects with ventricular hypertrophy had prior knowledge of their heart disease.

Blood Pressure. Table 5 summarizes the blood pressure abnormalities among the Hawaiians, Japanese, and other races. Blood pressure Group I represents those who had both systolic and diastolic blood pressures under 140/90 mm Hg, respectively. Group III are those with either systolic blood pressures of 160 mm Hg or above, or diastolic pressures 95 mm Hg or above; Group II represents those with values intermediate between Groups I and III.[13] Table 5 indicates that the prevalence of hypertension is greatest for the pure Hawaiian group (27.9 per cent of subjects are in Group III), next greatest for the part-Hawaiians, Japanese, and Caucasians, in that order (20.5 per cent, 14.5 per cent, and 13.1 per cent, respectively), with Chinese having 5.8 per cent of subjects in Group III.

Smoking Habits According to Race. The questionnaire included the question, "Do you regularly smoke more than ten cigarettes per day?" Table 6 presents the number and percentage responding affirmatively and indicates that 37.2 per cent of the pure Hawaiian group fell in this category, as

§ Age range studied in the main Hawaii Cardiovascular Study.

TABLE 5.—*Blood Pressure by Race.*

RACE OR ETHNIC GROUP	TOTAL NO. IN GROUP	GROUP I* SYSTOLIC BP BELOW 140 *and* DIASTOLIC BP BELOW 90 MM HG		GROUP II* INTERMEDIATE BETWEEN GROUPS I AND III		GROUP III* SYSTOLIC BP 160 OR GREATER *or* DIASTOLIC BP 95 MM HG OR GREATER	
		#	%	#	%	#	%
Japanese	400	178	44.5	164	41.0	58	14.5
Filipino	27	9	33.3	14	51.9	4	14.8
Chinese	103	59	57.3	38	36.9	6	5.8
Caucasian	183	84	45.9	75	41.0	24	13.1
Hawaiian							
Pure	43	10	23.3	21	48.8	12	27.9
Part	346	109	31.5	166	48.0	71	20.5
Other Races	65	36	55.4	20	30.8	9	13.8
TOTAL	1,167	485	41.5	498	42.7	184	15.8

* Criteria from *Am. J. Pub. Health*, 50:23 (Oct.), 1960.[13]

compared with 43.0 per cent of the Japanese group. While the significance of these differences is uncertain, it at least appears likely that cigarette smoking does not account for the considerably higher mortality rate from coronary heart disease in the pure Hawaiian group.

Relative Weight. Table 7 presents the relative weight index (weight in pounds divided by height in inches) for the various races and age groups studied. It will be seen that the Japanese subjects exhibit an intermediate relative weight figure for young ages, with relative weight then declining to low figures with older age. In contrast, three racial groups (part-Hawaiian, Caucasian, and Chinese) exhibited intermediate relative weight values for the young age groups and a progressive increase up to age 55. The highest relative weight figures were seen in the pure Hawaiian and part-Hawaiian groups, the average figure being 2.64* for both.

DISCUSSION

Because this study is limited in numbers and consisted of volunteers, conclusions proposed must be considered tentative. Within these limits, the prevalence of EKG-documented myocardial infarction was 2/388 (0.5 per cent) for Japanese men studied in the age range, 35 to 64; and 4/379 (1.1 per cent) for Hawaiian or part-Hawaiian men studied in the same age range. (These differences are not statistically significant.) A comparison of

* A relative weight of 2.64 would correspond, for example, with a person measuring 6 ft., 0 in., and weighing 190 lbs.

TABLE 6.—*Cigarette Smokers,* Percentage by Race and Age.*

RACE OR ETHNIC GROUP	AGE										TOTAL	
	34 & under		*35-44*		*45-54*		*55-64*		*65 & over*			
	#	%	#	%	#	%	#	%	#	%	#	%
Japanese	4	36.4	83	40.9	63	45.3	22	47.8	0	†	172	43.0
Filipino	0		2		8	72.7	2		0		12	44.4
Chinese	0		17	32.7	5	14.7	6	37.5	0		28	27.2
Caucasian	2		28	37.8	24	35.3	11	34.4	1		66	36.1
Hawaiian												
Pure	0		8	61.5	5	26.3	3	27.3	0		16	37.2
Part	3		76	42.0	44	39.3	17	39.5	1		141	40.8
Other Races	1		12	34.3	12	52.2	3		0		28	43.1

* Defined as ten or more cigarettes smoked each day.
† Percentage not calculated because of small numbers.

TABLE 7.—*Relative Weight Index by Race and Age.*
(Index = Weight (pounds)/Height (inches)

RACE OR ETHNIC GROUP	AGE										TOTAL, BY RACIAL GRP.	
	34 & under		*35-44*		*45-54*		*55-64*		*65 & over*			
	No.	*Avg.*	*No.*	*Avg.*	*No.*	*Avg.*	*No.*	*Avg.*	*No.*	*Avg.*	*No.*	*Avg.*
Japanese	11	2.30	203	2.29	139	2.26	46	2.14	1	2.58	400	2.26
Filipino	3	2.51	4	2.29	11	2.31	9	2.01			27	2.23
Chinese	1	1.93	52	2.30	34	2.31	16	2.34			103	2.31
Caucasian	6	2.35	74	2.53	68	2.62	32	2.45	3	2.52	183	2.54
Hawaiian												
Pure			13	2.73	19	2.57	11	2.63			43	2.64
Part	7	2.43	181	2.65	112	2.68	43	2.52	3	2.47	346	2.64
Other Races	1	2.52	35	2.39	23	2.48	6	2.32			65	2.42

prevalence rates for arteriosclerotic heart disease in Hiroshima, Japan, and Framingham, Massachusetts, was made by Yano,[14] revealing that the prevalence in Japanese men in Hiroshima (aged 30 to 59 in 1958-1960) of definite myocardial infarction by EKG was 0.25 per cent, while the prevalence of definite myocardial infarction by EKG in Caucasian men in Framingham (aged 30 to 62 in 1949-1952) was 0.84 per cent.[14]

Electrocardiographic evidence of left ventricular hypertrophy and nonspecific ST and T-wave abnormalities have been shown by the Framingham Study[9, 15] to be definite risk factors in the development of coronary heart disease. The prevalence of these two EKG abnormalities combined, in the various racial groups is as follows: Japanese, 4.2 per cent; Chinese, 10.7 per cent; Caucasian, 12.0 per cent; pure Hawaiian, 9.3 per cent; and part-Hawaiian, 7.2 per cent. Insofar as these are definite risk factors, the Chinese would appear intermediate between Japanese and Caucasians in their vulnerability to coronary heart disease. Available mortality rate data for Chinese[7] are in accord with this. The relatively low prevalence in Hawaiians is surprising. While this discrepancy may result from the nonrandom selection of the present study group, the possibility exists that the relationship between coronary heart disease morbidity and mortality is different than for the other racial groups.

Pure Hawaiians have the highest percentage (27.9 per cent) of cases with hypertension. Next in order of frequency are part-Hawaiians (20.5 per cent), then Japanese (14.5 per cent) and Caucasians (13.1 per cent), with Chinese having a relatively low prevalence (5.8 per cent).

The finding of the greatest prevalence of hypertension being among Hawaiians and part-Hawaiians is in accord with other studies of Polynesians in New Zealand[16] and in the Cook Islands.[17] Hunter[17] reports 25 per cent of Rarotongan males above age 40 to have hypertension (casual blood pressure greater than 160/95). Of interest in Hunter's study is the finding among Polynesians on another, unacculturated island of only 10 per cent prevalence of hypertension in a group of men above age 40, who were generally less overweight and who performed more physical work than those on Rarotonga. This suggests that hypertension in the above locale may be subject to environmental influences (though the possibility of genetic selection due to island isolation is not ruled out).

It is of interest that in the present study half of those with electrocardiographic evidence of myocardial infarction, and all those with left ventricular hypertrophy, were unaware of having heart disease. This emphasizes the necessity of cardiovascular screening in order to better estimate the prevalence of coronary heart disease in a population. Furthermore, high risk factors which predispose to coronary heart disease and which may be amenable to therapeutic correction can be determined.

SUMMARY

An electrocardiographic screening study was conducted on a volunteer group of 1,167 workers of the City and County of Honolulu and of the Hawaiian Telephone Company. Reportable electrocardiographic findings were found in 163, including six previously unrecognized myocardial infarctions, and 15 examples of previously unrecognized left ventricular hypertrophy. The prevalence of hypertension was highest among Hawaiians in this study.

References will appear in the authors' reprints.



The President's Page



In previous communications to you I have tried to outline some of the facts of P.L. 89-97, the so-called Medicare Law. The surface only has been touched and it would be impossible to cover the details of the complex law in the President's Page. Educational bulletins are being released to the membership of the Hawaii Medical Association apprising them of certain aspects of Title 18 and later of Title 19.

I should like to re-emphasize that the only way for this program to operate successfully and to give the physician a measure of freedom is the necessity for *direct billing* of the patient and *not* in the assignment of fees directly from the carrier to the physician. Direct billing means that the physician bills the patient for his usual and customary fees and the patient then presents a receipted bill to the carrier for reimbursement. An additional warning should be directed to hospital-based physicians who may be urged to assign their receipts to the hospital.

The AMA is already proposing a change which would enable the patient to present the bill directly to the carrier for payment without having the patient pay the bill first. The idea behind this is that in some instances it would work a hardship on the patient without funds to have to pay his physician in full before being compensated by the government through the carrier. The AMA is also working for further modification of this law with particular regard to eliminating the requirement that a patient must be admitted to an acute care facility for at least three days before qualifying for extended care facilities. It is thought this requirement will be cumbersome and will cause unnecessary use of acute care beds.

The second area of major importance is the functional effectiveness of Utilization Committees. Without physician control of utilization, the plan will fall apart and the government will step in to control the entire program.

It was gratifying to receive about 140 acceptances from our membership by those who are willing to serve on Utilization and Advisory Committees. It is believed before long we will have at least 200 of our membership who will be willing to function in one of these capacities if called upon to do so.

Meetings are in progress with representatives of the Social Security Department, the Commission on Aging and the Department of Health relative to the implementation of Medicare. There has been up to now a cooperative spirit manifest throughout these discussions. The Hawaii Medical Association strongly opposed a Governor's conference in February, but we do support a conference in May at which time it is believed most of the regulations pertaining to this law will have been issued. The work of Dr. Lummis of the Department of Health has been particularly heavy and the responsibility is great in that area. He is to be commended by our Association and we urge cooperation by our members in assisting the Department of Health, should it be required.

The responsibility of our profession was never greater than now in guiding and advising and piloting in these rough seas of socio-economic revolution. It is our responsibility to see that these two laws are operated in keeping with our traditional support of the philosophy of good medical care for all, and I might add, without the interposition *totally* of a third party between the physician and his patient. Partial "interposition" has already occurred, but by wise and judicious steering we can hope to keep it to a minimum.

Ord Pinkerton


Flagyl destroys trichomonads
here & here & here & here
No topical treatment can

Flagyl®

brand of

metronidazole

Flagyl eliminates the difficulties and frustrations that have long attended the treatment of trichomonal infection.

These difficulties arose mainly from:

1) the failure of any previously known agent to destroy the protozoan in paravaginal crypts and glands;

2) the failure of any previously known agent to prevent reinfection by eradicating the disease in male consorts.

The introduction of Flagyl removed both of these long-standing deficiencies. Hundreds of published investigations in thousands of patients have confirmed the ability of Flagyl to cure trichomoniasis.

Correctly used, with due attention to repeat courses of treatment for resistant, deep-seated invasion and to the presumption of reinfection from male consorts, Flagyl has repeatedly produced a cure rate of up to 100 per cent in large series of patients.

Nothing cures trichomoniasis like Flagyl.

Dosage and Administration

In *women:* one 250-mg. oral tablet t.i.d. for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When the inserts are used one vaginal insert should be placed high in the vaginal vault each day for ten days, and concurrently two oral tablets should be taken daily.

In *men:* in whom trichomonads have been demonstrated, one 250-mg. oral tablet b.i.d. for ten days.

Contraindications

Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precautions and Side Effects

Complete blood cell counts should be made before and after therapy, especially if a second course is necessary.

Infrequent and minor side effects include: nausea, unpleasant taste, furry tongue, headache, darkened urine, diarrhea, dizziness, dryness of mouth or vagina, skin rash, dysuria, depression, insomnia, edema. Elimination of trichomonads may aggravate moniliasis.

Dosage Forms

Oral–250-mg.tablets/Vaginal–500-mg.inserts

SEARLE

Research in the Service of Medicine

HAWAII MEDICAL JOURNAL

Editorials

H.M.S.A. and the Doctors

Why should a health insurance plan, the H.M.S.A., which has had the overwhelming support of practicing physicians in Hawaii for twenty-eight years, be soliciting for participating physicians today? The reasons go deep. Contract negotiations broke off when the H.M.S.A. refused to accept simultaneous termination of individual participating physicians' contracts along with the master contract. So adamant was H.M.S.A. that for a while they were not sure they would accept the negotiating committee with which they had been negotiating for over two years.

And this matter of freedom. H.M.S.A. claims that to accept simultaneous termination of contracts abridges the individual physician's freedom. Actually the opposite is true. Since the master contract protects physicians from arbitrary changes by H.M.S.A. in fees, operating procedures, the form of the individual participating agreements, and so forth, to continue as an individual participating physician without a master contract in force is to let an insurance carrier dictate your fees and allow you no voice in negotiation of administrative matters affecting the quality of medical care provided.

It would seem that H.M.S.A. thinks they know what is best for the doctors better than the doctors themselves. The fact that the vote to terminate was unanimous in Honolulu and nearly so on Maui and Hawaii seems to impress them not one bit.

H.M.S.A. seems bent on controlling doctors, but their interests seem limited purely to financial matters. It took 14 years for H.M.S.A. to agree to pass on to the medical societies, for disciplinary action, irregular practices uncovered by review committees.

H.M.S.A. showed their disdain for the medical societies by writing to their insured groups not to worry if the medical society cancelled their contracts, since they could set up an association of participating physicians and continue business as usual. As H.M.S.A. has grown in strength and affluence, they feel they don't need the doctors collectively. When they were younger they were glad to accept a subsidy from physicians.

H.M.S.A.'s basic organization is wrong in that it does not accept or take into its confidence physician committees of the medical societies to work with it to develop new plans or to review claims. These committees are H.M.S.A. committees, who do not involve the societies in these matters. And H.M.S.A. will not agree to changes in this relationship.

H.M.S.A. has grown big with big reserves through being sold as a doctor-sponsored Blue Shield Service Plan. Today it is neither of these. No self-respecting professional man could continue to work under such a system, let alone sponsor it. We believe the next move is up to H.M.S.A. We do not believe that their present attempt to bypass and divide the professional society is good for anyone.

HAWAII MEDICAL JOURNAL

This Is What's New!

• **Insect stings** in some individuals present a life-threatening emergency. Stings about the head including mucous membranes appear to be more dangerous to life than stings on the outer parts of the neck, extremities, and trunk. Specific desensitization is recommended for cases with history of severe anaphylactic reactions and every patient with a history of **anaphylaxis** to insect stings should have an **emergency kit** containing **epinephrine,** an **antihistaminic,** and an adrenocortical **steroid.** (*Schweiz. Med. Wschr.* [Dec. 18] 1965).

• **Graves' disease** may exist **without hyperthyroidism** because of inability of the thyroid gland to respond to long-acting thyroid stimulator (LATS). Five patients studied in Tennessee had exophthalmos typical of Graves' disease, but lacked evidence of hyperthyroidism. They failed to develop hyperthyroidism because previous disease of the thyroid gland limited its ability to respond to thyroid-stimulating LATS hormone and thus produce increased amounts of thyroid hormone and full clinical picture of hyperthyroidism. (*Amer. J. Med.* [Nov.] 1965).

• **Amputation** may be **life saving** in severe **burn of an extremity.** The three factors most important in making this decision are evidence of sepsis, likelihood of hemorrhage, and extensive nonviability of the burned extremity. (*J. of Trauma* [Nov.] 1965).

• Epidemiological studies indicate that **pulmonary tuberculosis** increases considerably the patient's probability of developing **carcinoma of the lung.** The risk in men is about the same as for heavy smokers and the risk in a woman with tuberculosis is even higher. Men with pulmonary tuberculosis have a five-fold higher risk, and women a ten-fold higher risk, of developing pulmonary cancer. (*Amer. Rev. of Resp. Diseases* [Nov.] 1965).

• **Phenobarbital** given to patients on anticoagulant therapy **increases the need for anticoagulant** between 15 and 20 per cent. A 33 per cent increase in bishydroxycoumarin dose was required in patients receiving phenobarbital. (*New England J. of Med.* [Nov. 11] 1965).

• **Decompression sickness** following **repeated breath-holding dives** to approximately 50 to 60 feet is reported from Denmark. Similar cases have been reported in the Norwegian Navy. Symptoms are similar to those of *taravana,* the pearl divers' disease of Tuamotu in the South Pacific. Immediate recompression is the treatment of choice. (*J. Appl. Physiol.* [Sept.] 1965).

• **Intracavitary 5-fluorouracil** has been used successfully in **malignant effusions.** Fifty-five patients with carcinoma metastatic to the **pleura, peritoneum,** and **pericardium** were treated by the injection of 2 to 3 grams of 5-fluorouracil into the involved cavity. The dose was reduced in the three cases with pericardial effusions. The results were comparable to those obtained by the use of nitrogen mustard or radiogold. Fifty-eight per cent were improved. The drug is **easy to administer,** and **inexpensive.** There is **no radiation hazard,** and **no serious side effects** were noted. (*Arch. Intern. Med.* [Sept.] 1965.)

• **Diagnosis of hyperparathyroidism** is to be suspected, in the majority of cases, not by painstaking history and extremely careful physical examination, but by an **elevated value for serum calcium,** routinely measured in all patients that appear at a medical clinic. A serum calcium was routinely performed on all patients going to an Indiana Clinic; 31 patients with primary hyperparathyroidism were diagnosed in five and a half years. Only **one-fourth** of these patients had **signs or symptoms** which would ordinarily suggest hyperparathyroidism. Many of them, however, had non-specific symptoms that improved after cure of the hyperparathyroid state. Approximately **one case** of hyperparathyroidism was discovered for every **1,000 patients** having serum calciums performed. (*Ann. Intern. Med* [Sept.] 1965.)

• The outbreak of **sulfonamide-resistant meningococcal meningitis** at Fort Ord last year has been extensively studied. The researchers concluded that the resistant strain developed on the post **as a result** of the extensive use of **sulfadiazine.** Most of the resistant strains were group B, while the sensitive strains were group C. It is suggested that **mass prophylaxis with sulfadiazine** is **contraindicated** if the **dominant strain is resistant.** (*Amer. J. Epidemiol.* [July] 1965.) ■

FRED I. GILBERT, JR., M.D.

HAWAII MEDICAL JOURNAL

In Memoriam – Doctors of Hawaii.....

This is the fifty-ninth installment of In Memoriam—Doctors of Hawaii.

George T. Webb

George T. Webb was born in Petrograd, Russia, on December 22, 1887, the son of English parents, Walter Tresh and Alice (Otten) Webb.



DR. WEBB

He was educated at a Petrograd high school and received his medical degree from the Schleisische-Friedrich-Wilhelms Universität Medizinische Fakultät at Breslau, Germany, in 1911. From 1911 to 1913 he interned at Alexander Hospital, St. Petersburg, Russia, followed by a year as assistant surgeon.

On October 13, 1916, Dr. Webb married Alexandra Argusoff, also a physician and surgeon.

Both Dr. Webb and his wife served in the Russian Army on the Russo-German front during World War I. Dr. Webb was Assistant Surgeon of the 311th Field Hospital, and Mrs. Webb was surgeon with a Red Cross field ambulance unit. Swept eastward through Siberia in 1918, Dr. and Mrs. Webb reached Vladivostok where he served for many months as attending surgeon at the American Red Cross Hospital. It was during this period that he became closely associated with Riley H. Allen, Editor of the *Honolulu Star-Bulletin* and a Lieutenant Colonel in the Red Cross, and Dr. W. D. Baldwin of Maui, chief of the Red Cross hospital at Vladivostok. Through the influence and friendship of these two men Dr. and Mrs. Webb made the decision to come to Hawaii.

In May, 1919, Dr. and Mrs. Webb arrived in Maui where Dr. Webb became superintendent of the hospital of the Pioneer Mill Company at Lahaina. He served in this capacity and as government physician at Lahaina until October, 1926, when the Webbs left for New York in order that he could have a more specialized type of practice.

Until the time of his death, Dr. Webb lived in Brooklyn, New York, and from 1929 he was the Senior Assistant of surgical services at the Coney Island Hospital.

Dr. Webb died August 20, 1949, in Brooklyn, at the age of 61.

He was a member of the Brooklyn Surgical Society, the Kings County Medical Society, the New York State Medical Society, and the American Medical Association, and a Fellow of the American College of Surgeons.

Waldemar Alfred Christensen

Waldemar Alfred Christensen was born in Copenhagen, Denmark, on May 14, 1870. He was the son of Jorgen and Emilie (Kunnerup) Christensen.

He attended the University of Transylvania at Lexington, Kentucky, and received his medical degree from the Kentucky School of Medicine at Louisville in 1896. From 1897 to 1898 he was resident surgeon at German Hospital in San Francisco.

Dr. Christensen married Christine Amalie von Astup in San Francisco on September 3, 1897. Three children were born to the Christensens: Ethel, Carmen, and Haagen.

In 1898 Dr. Christensen became surgeon at the shipyard of the Alaska Commercial Co., Unalaska.

From 1898 to 1903 he was a surgeon with the U. S. Volunteers and served with the Army in the Philippine Islands. During the following seven years he was medical inspector and health officer with the Philippine Civil Service. In 1910 Dr. Christensen became a medical officer in the U. S. Army where he saw active field service in numerous campaigns and battles in the Philippines and was surgeon of the 7th Cavalry during the pursuit of Villa by the punitive expedition into Mexico in 1916. At the time of his discharge in 1919, Dr. Christensen held the rank of Major.

Coming to Hawaii in October of 1919, he became physician and surgeon to the Hamakua Mill Company and the Kaiwiki Sugar Company. He served as a plantation and government doctor on Hawaii until shortly after the outbreak of World War II when the family moved to San Francisco.

Dr. Christensen died February 6, 1942, in San Francisco, at the age of 71.

He was President of the Manila Medical Association in 1909, a member of the American Medical Association, an Odd Fellow, and a Mason.

HAWAII MEDICAL JOURNAL

Bureau of Medical Economics

With the coming of the new year, many doctors, clinic managers, and administrators may be making new year resolutions. I would like to add a few that I feel it might be wise for them to consider.

When called upon by a representative of a collection agency who makes fantastic claims pertaining to the collection ratio of his organization, ask the following questions:

How many doctors or medical organizations does your company collect for and precisely what is your method of collection?

The reason for these questions is that collection agencies have been known to claim that they impound motor vehicles for medical debts. While this is absolutely legal under certain circumstances, it is hardly the type of debt negotiation that is in keeping with a doctor-patient image. The impounded vehicle might be the means of transporting the bread winner of the family to his place of employment, as in the case of a construction worker. Such an action would create a bad image in the eyes of the patient, his relatives, and the dozens of friends to whom the story would be told. This could be dangerous to a doctor's most precious possession—his reputation.

What type of correspondence is used?

Ask the representative to show you the type of letters, forms, and other correspondence that he uses to effect collection. There is a definite reason for this. Some agencies use a "first letter" that looks like a court summons. As a matter of fact, one hospital was using this form of notice, until it was realized that it constituted an exceedingly undignified form of correspondence. They immediately stopped the use of this form of notice.

What are the hidden percentages and other charges?

Be certain that no other charges are being made to the debtor other than those that are absolutely legal and correct.

Does the garnishee affect the debtor's employment?

Here again, cases have been known where agencies have no knowledge whether a garnishee affects a debtor's employment. Many just go ahead and garnishee. Many companies find reasons to dispense with the services of an employee who has a garnishee. All reputable agencies have knowledge of the companies that are "garnishee shy" and are always positive of every case before a garnishee is established. It is obvious that if a man loses his job, he cannot effect payment anyway. Therefore it is always wise to make certain that the collection agency with whom you are doing business does not garnishee in a haphazard fashion. Here again the doctor-patient image is important, because if a man were to lose his employment because of such circumstances, the doctor might easily be the person who the debtor would blame. I've seen this happen time and time again. The debtor never considers that the agency is responsible, only the doctor.

Does the agency routinely give progress reports?

Ask to see a progress report sheet as sent out to other physicians already using the collection service.

Are there monthly statements?

Samples of monthly statements to doctors should be seen by the prospective client, whereby he can clearly see the type of firm he is dealing with. Good organizations use I.B.M., or Remington Rand, or one of the better known accounting systems. It is always wise to investigate all matters pertaining to the methods whereby you are going to get your money. There should always be a statement showing precisely how much was collected from the client, and how it was disbursed. It should also show your share, the agency's share, how much was deducted, whether the case was a legal procedure, and what percentage was charged for collection.

A final word of advice on the matter of the type of agency with which you propose to deal. Whenever possible, you would be well advised to deal with old established agencies. A further precaution would not be amiss, get the names of two or three physicians whom the agency states they are at present representing, and get some first-hand information concerning their ability to represent you. Most agencies are reputable, but one will find that there is a bad apple in every barrel. See to it that you do not get the bad apple, as it could do much to harm your practice.

GABRIEL ROGERS, *Manager*

HAWAII MEDICAL JOURNAL

Book Reviews

From Auscultation to Phonocardiography

By Aldo A. Luisada, M.D., with the collaboration of D. M. MacCanon, Ph.D., L. M. Rosa, M.D., P. M. Shah, M.D., and R. Zalter, M.D., 351 pp., $17.75, The C. V. Mosby Company, 1965.

THOUGH CLASSIC AUSCULTATION was developed almost a century ago, the combination of cardiac catheterization with phonocardiography, both external and internal, has caused us to revise some of our ideas about the production of heart sounds. Human hearing even at its best is a faulty and inefficient method of assessing heart sounds, and phonocardiography bypasses this obstacle.

This excellent text correlates phonocardiograms with cardiac function and clarifies the many technical aspects of phonocardiography, which is much more complex than electrocardiography.

FRANCES F. NAKAMURA, M.D.

Textbook of Parasitology, 3rd Ed.

By David L. Belding, M.D., 1374 pp., $17.95, Appleton-Century-Crofts, 1965.

THE FIRST EDITION of this standard reference was published in 1942 under the title *Textbook of Clinical Parasitology*. After a short introduction, this edition is followed by a forty-six chapter systematic presentation of medical parasitology (parasitic protozoa, parasitic mites). Chapters 47-51 consider insecticides and repellents, mollusks, pathology, immunity, and disease transmission. Chapters 52-56, by Alice T. Marston, cover diagnostic techniques, and procedures for examination of definitive, reservoir, and carrier hosts. The two final chapters, written by Matthew A. Derow, discuss chemotherapy and treatment.

An implied objective of this edition is to incorporate advances in parasitology during the past decade. How effectively this has been done is questionable if the following parasites are representative. Angiostrongylus cantonensis, a parasite of particular importance to the Pacific Basin, is given only twenty-five lines (pp. 450-451), and several medically significant facts have been omitted. The Troglotrema salmincola material (pp. 709-710) reveals numerous inaccuracies, including an incomplete reference, an erroneous statement on treatment, confusion about the etiologic agent, obsolete nomenclature, and reference to a sporocyst stage that has not been described.

The book is printed on good quality paper and contains numerous illustrations. Species information is arranged so that comparable facts appear under similar headings. Tabular data provide comparisons of differential characteristics, pathology, and symptomatology for related species. Monochromes showing gross or microscopic lesions are poor reproductions and could be improved.

The traditional phylogenetic format is used. Although this approach may seem satisfactory to the taxonomist, it depreciates emphasis on the disease. More logical and useful would be a reference stressing pathology, epidemiology, and control, with general organization based on body systems.

STUART E. KNAPP, Ph.D.
Corvallis, Oregon

★Physiologic Foundations for Marriage Counseling

By Joseph B. Trainer, M.D., 287 pp., $8.00, The C. V. Mosby Company, 1965.

THIS EXCELLENT BOOK of some 270 pages is not only structurally readable, but contains a wealth of information which is physiologically sound and based on common sense and mature understanding. It is not a "how to do it" book on sex, but a rare and much needed source of background material necessary for satisfactory marriage counseling.

The author early emphasizes that "study of the physiologic basis for married behavior requires far more than a restrictive discussion of sex." There is a reminder that we are primarily human beings, and secondarily male or female; thus, the need for diligent care to be directed to the wholly human aspects of the couple. Stressing the need for and the importance of compatibility, the author carries the discussion from the chapter on "Evolutionary Look at Human Reproductive Behavior," through the influences of hormones, across the physiologic problems of married life into the excellent chapter on the "Institution of Marriage."

Dr. Trainer states that the book is sometimes impartial, and it is properly so, because the science of anatomy, chemistry, and physiology provides no choice. The content is sometimes opinionated, and I believe justifiably so, in a field of practical medicine that has grown only with experience. Shedding of century-old taboos, better understanding of basic human instincts, changing attitudes of society and religion, all lend to alterations in the concept of marriage counseling. As the author's opinions seep through his writing, they add much to the richness of the contents. The book is frequently irreverent, says the author, and how grateful we can be for the inherent humor of the writer, which prevents textbook stuffiness without a hint of crudeness and without depreciating the value of the priceless messages contained therein.

Although I don't believe Oriental infants are the only ones who can survive on soy bean milk, the errors, if any, are minor and mostly typographical. If the discussions have by necessity been too brief, the manner of presentation of the subject will certainly stimulate added reading.

This textbook is recommended with enthusiasm for all people concerned in human beings and their "needs for attention, for love, for appreciation, and for approval."

WILLIAM S. ITO, M.D.

★Scintillation Scanning in Clinical Medicine

By James L. Quinn, III, M.D., 278 pp., $11.50, W. B. Saunders Company, 1964.

THIS CURRENT and comprehensive text on radioisotope scintillation scanning is a collection of papers presented in early 1964 at a symposium sponsored by Bowman Gray School of Medicine. Some of the most authoritative investigators in this new and exciting field of nuclear medicine discuss the basic principles and clinical significance of scanning.

The established methods of scanning in diseases of the thyroid, brain, spleen, liver, and kidney are critically

continued page 262

★ means highly recommended.

Hawaii Academy of General Practice

UTILIZATION COMMITTEES

Our beloved American Revolution came into being, and went on to its successful conclusion, the birth of the American Constitution, primarily because lawlessness was the spirit of the times, in both the Old World and even more so, the New.

By contrast (current so-called minor lawlessness notwithstanding) our citizenry is law-abiding. Our government is so strong and so large that it will be obeyed in its smallest regulation, no matter how unjust that ruling might be. It was thus in the days of Cicero, not long prior to the decline and fall of Rome. Its government used largesse as a potent weapon against the people, to appease them and to quiet their unrest, catering to their greed for the soft and pleasurable life.

The advent of MEDICARE finds us physicians apparently blind to the lessons of history and to the ominous implications of a similar take-over by government—a government that, like its counterpart of over a thousand years ago, is taking more and more from the earnings of its people in order to manage the dispensing of their wealth "for their own good." Those in power in government have a basic contempt for the people's ability to take care of themselves, much less think for themselves.

What we, as physicians, must realize clearly is that, in MEDICARE, we are being maneuvered into an untenable position. The hierarchy of the AMA apparently does not see this.

Public Law 89-97 is a bad law. The administrative branch of the government already knows, as we physicians do not, that at best, the law is going to be extremely difficult to put into practice, and at worst, that it will lead to soaring costs to the taxpayer and to cries of dissatisfaction from the beneficiaries.

Politically, the Administration cannot stand to bear either of the latter. It has, therefore, devised a means to avoid the responsibility for failure in every eventuality. The scheme is nefarious in that it leaves us physicians no way out of a dilemma, and in that it is we who will be held liable for either the inevitable rise in cost to the taxpayer, or to the equally inevitable deterioration of the quality of medical care in this country.

How is this being done? Through Utilization Committees. No hospital, extended care facility, or home health program—and there will be no other dispensers of benefits under Part A of PL 89-97—may be accredited to MEDICARE unless Utilization Committees, made up only of physicians, are extant and functioning according to rules and regulations set up by the Secretary of HEW.

Keep the following alternatives in mind: (1) If the particular Utilization Committee leans in favor of the attending and his patient, the costs of MEDICARE will go up—actuarial experts are all agreed on this. Who gets the blame? The physicians and their committees. (2) If the particular Utilization Committee hews closely to HEW's line, it will breed discontent, discord, and eventually nonparticipation on the part of the hapless attending physicians. The quality of medical care to the beneficiaries will decline measurably. Who will be to blame? The physicians, of course. And, what's more, we are expected to rub our noses in the dirt by serving on these committees and writing all the government-required periodic reports gratis!

The Administration, very cleverly, takes itself out of the line of fire of public criticism of the program.

For us to be placed at the helm of a ship whose building and launching we, and our AMA, opposed with logic and foresight; a ship rotten from the keels on up; a ship that we've been promised would take the people to Utopia; a ship whose first cargo is the group of elderly and infirm who may well become the first victims of a shipwreck; for us physicians to be asked, nay, practically forced, to take the helm, is unmoral and mean, but very clever!

Are we physicians going to accept the role of making a bad law work?

Better, far better, will it be for us to let the Secretary, Department of Health, Education and Welfare, appoint his own lay members to the Utilization Committees, in which event the people themselves will soon discover wherein are the inherent evils of Public Law 89-97, and the blame will descend upon those who devised it and foisted it upon the unsuspecting and unknowing public.

J. I. FREDERICK REPPUN, M.D.
Secretary

New Members



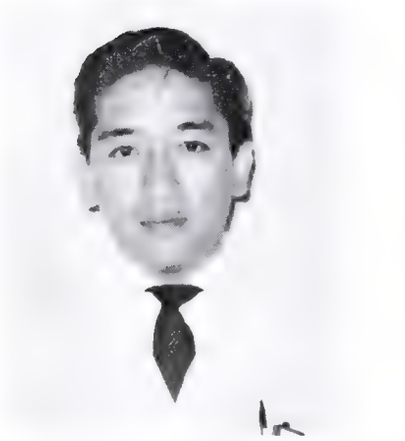
Sakae Uehara, M.D.
1939 Vineyard Street
Wailuku, Maui 96793
GENERAL SURGERY
University of Chicago School of Medicine—1955
Internship—Harper Hospital, Detroit, Michigan—1955-56
Residency—Brent General Hospital, Detroit—1956-57
Hines VA Hospital, Hines, Illinois —1959-60
Wayne State University Affiliated Hospitals, Detroit—1960-64



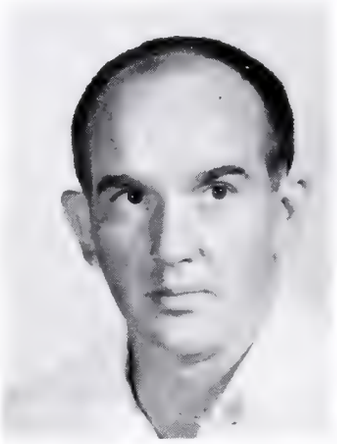
Lawrence H. Gordon, M.D.
Suite 520, Ala Moana Bldg.
Honolulu, Hawaii 96814
ORTHOPEDICS
Stanford Medical School—1955
Internship—Cincinnati General Hospital—1954-55
Residency—D.C. General Hospital—1955-56
Stanford—1956-58
Highland-Alameda County—1958-59



John Paul Clarkin, M.D.
Rm. 127, Aina Haina Shopping Center
Honolulu, Hawaii 96821
PEDIATRICS
University of Philippines—1956
Internship—Milwaukee County General Hospital—1955-56
Residency—Elmhurst General Hospital—1956-58
University Hospital of NYU—Bellevue Medical Center—1958-59



Manuel A. Abundo, Jr., M.D.
Ewa Clinic and Hospital
Ewa Beach, Hawaii 96706
GENERAL SURGERY
University of Santo Tomas—1957
Internship—MacNeal Memorial Hospital—1958-59
Residency—MacNeal Memorial Hospital—1960-61
The Queen's Hospital—1962-65



Robert Dean Edwards, M.D.
P. O. Box 188
Haina, Hawaii 96709
GENERAL PRACTICE
Temple University School of Medicine—1962
Internship—St. Francis Hospital—1962-63



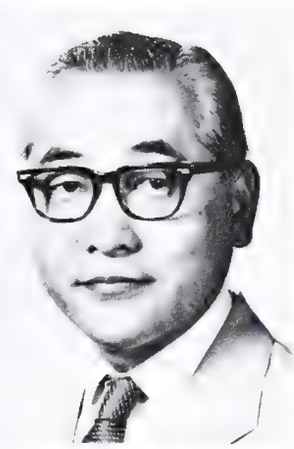
Roger Bernard Brault, M.D.
30 Aulike St., Suite 601
Kailua, Hawaii 96734
GENERAL SURGERY
University of Ottawa—1957
Internship—St. Charles Hospital, Toledo, Ohio—1957-58
Residency—The Queen's Hospital —1958-59, 1959-63
University Hospital, Edmonton, Alberta, Canada—1964-65



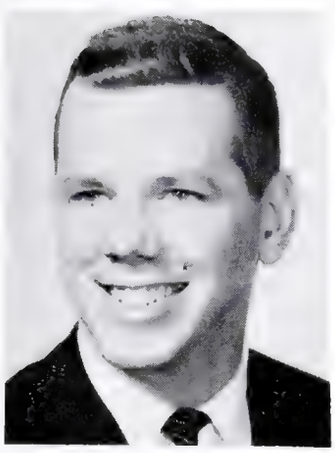
Anna Maria Brault, M.D.
30 Aulike St., Suite 601
Kailua, Hawaii 96734
INTERNAL MEDICINE
University of Ottawa—1957
Internship—St. Charles Hospital, Toledo, Ohio—1957-58
Residency—The Queen's Hospital—1958-61
University of Alberta Hospital—1964-65



Guy William Heder, M.D.
Kahuku Medical Clinic
Kahuku, Hawaii 96731
GENERAL PRACTICE
Temple University, Philadelphia—1956
Internship—Southern Pacific Hospital, San Francisco—1956-57



Harry Hiroaki Nakata, M.D.
1010 South King Street, Suite 304
Honolulu, Hawaii 96814
OBSTETRICS-GYNECOLOGY
University of Buffalo—1960
Internship—Edward J. Meyer Memorial Hospital—1960-61
Residency—Millard Fillmore Hospital—1961-64
Roswell Park Memorial Hospital—1964-65



Wallis Bruce Lewis, M.D.
1374 Nuuanu Avenue
Honolulu, Hawaii 96817
ANESTHESIOLOGY
Indiana University Medical School—1962
Internship—The Queen's Hospital—1962-63
Residency—Indiana University Medical Center—1963-65



Kenneth H. Christensen, M.D.
P. O. Box 187
Kailua, Hawaii 96734
GENERAL PRACTICE
University of Toronto—1957
Internship—St. Joseph Hospital, Toronto—1957-58



Edward Taras, M.D.
839 South Beretania Street
Honolulu, Hawaii 96813
OBSTETRICS-GYNECOLOGY
University of Toronto, Canada—1958
Internship—Montreal General Hospital—1958-59
Residency—Montreal General Hospital—1958-59
Montreal General Hospital—1959-60
Margaret-Hague Maternity Hospital—1961
Royal Victoria Hospital—1962-63
Jewish General Hospital—1963-64

County Society News

Hawaii

Drs. Chew Mung Lum and George Mills from the HMA's Medical Care Plans and Fees Committee were guests at the August 19 meeting. They discussed the new RVS and the status of HMSA negotiations. It was voted to poll the members by mail on whether the Society should sever its master contract with HMSA.

It was suggested that a subsequent Society meeting be held at the Mauna Kea Hotel and it was voted that the annual meeting be held there in place of the annual Christmas Party and that funds appropriated for the Christmas Party be used for this meeting for members and wives. The members were advised that since funds were adequate, there would be further delay in sending out the notices of a $5.00 assessment.

Dr. Eklund announced that there were two new physicians in the County, Dr. Simmonds at Pahala and Dr. Edwards in Honokaa. Dr. Rowe has left Pahala and is working in the Trust Territory. He wants to remain a member of the Society.

The Society discussed the possibility of inviting the HMA to hold its 1967 annual meeting in Hilo. This will be explored further to see what is involved.

At the October 8 meeting guests included Dr. Carvalho and Dr. Bunker, an anesthesiologist from Stanford It was voted to agree to the HMSA paying physicians three times a month. A vote of confidence was given Drs. George Mills and Chew Mung Lum of Honolulu for their work with HMSA and on the fee survey. It was voted to permit these doctors to release information as they feel necessary. It was voted to adopt a form relative to prophylactic treatment of tuberculin converters prepared by Dr. Henderson. A Nominating Committee consisting of Drs. Okumoto, Bracher, and Yuen were appointed. Dr. Bunker's talk on "Acid-Base Balance and Respiratory Emergencies" concluded the meeting.

* * *

Drs. O. D. Pinkerton and T. T. Tomita were special guests at the October 22 meeting. After referring one membership application to the Credentials Committee, the meeting started with a discussion of the HMSA negotiations. It was suggested that Hawaii have a more permanent committee to represent it and that it receive earlier notification of the HMA meetings with HMSA.

Dr. Pinkerton spoke on PL 89-97 and explained why advocacy of nonparticipation by a group would violate the Sherman Anti-trust Act. He gave a brief summary of the provisions of the Medicare law. Dr. Tomita concluded the presentation with a talk on fiscal agents and assignment of fees.

* * *

The Treasurer's Report was the first item of business at the November 12 meeting. Dr. Robert Dean Edwards of the Haina Dispensary was elected to membership. It was decided to invite Dr. Ivy, the HMA PR Committee Chairman, to visit Hawaii in January. A discussion on different PR programs followed this action.

The Nominating Committee's slate was unanimously elected as follows: President, Ed Helms; Vice President, Etta Wright Best; Secretary, Charles Belcher; Treasurer, Paul Caldwell; HMA Delegates, R. P. Wipperman, James Mitchel, Walter Loo; HMA Alternate Delegates, Pete Okumoto, Harold Lewis, George Bracher.

Dr. George Mills spoke on the HMSA negotiations, prevailing fees, Foundation plans, and utilization committees. Dr. Caldwell commented on the recent review of the Hilo Hospital by the State Department. The meeting concluded with a talk by Dr. William Fitts from the University of Pennsylvania on "Carcinoma of the Breast."

Honolulu

The September 7 meeting was preceded by a film entitled "Monanga." The President announced the names of the following new members: Edwin Child, Gerald Faulkner, Maurice Howell, Gabriel Ma, Edwin Curphey, Michael Hase, Shigemi Sugiki, Murray Berger, Harold Deabler, and Edward Payne. A few moments of silence were observed in memory of Dr. Richard Kainuma. The scientific portion of the program was moderated by Dr. Shoyei Yamauchi who introduced a panel consisting of Drs. Grover Batten, I. L. Tilden, and Robert Edlund who spoke on the "Recent Advances in Oncology." A special meeting of the Board of Governors and the Board of Trustees of the Foundation for Medical Care followed the membership meeting.

* * *

Approximately 340 members attended the special meeting called on September 14. After the President's opening remarks, the program was turned over to Dr. Richard D. Moore. The first half of the meeting was devoted to a review by Dr. Chew Mung Lum of the negotiations which had taken place with HMSA. Following this presentation it was voted to terminate the Society's master contract with HMSA and to file notice of termination of individual contracts in 90 days if there is no satisfactory negotiation with HMSA. Dr. Wong informed the membership that the officers of the Society at a special meeting agreed unanimously that the HMSA Negotiating Subcommittee of the Hawaii Medical Association Medical Care Plans & Fees Committee be given the responsibility of continuing the negotiations with HMSA. The meeting was concluded with an explanation by Dr. George Mills of how the Hawaii Relative Value Study was developed and how it is to be used.

Slightly more than 200 members were present at the October 5 meeting when Senator Tap Pryor spoke on "Man in the Sea." The President announced that the following new members had been elected: Catalino C. Cachero, Albert Chew Keong Chun-Hoon, George Kenessey, Robert H. Oishi, Donald A. Peck, Frederick E. Popoff, E. Lee Simmons, Livingston M. F. Wong, and Young K. Paik. The President asked for and received a vote of confidence of the membership in the Board of Governors' action in delegating the HMSA negotiations to the HMA's Negotiating subcommittee of the Medical Care Plans & Fees Committee. HMA President O. D. Pinkerton made his official visit and spoke on the recent special AMA meeting in Chicago. He also presented a brief analysis of PL 89-97. Dr. George Mills reported on the Foundation program and advised that the Hawaii RVS had been adopted. He announced our affiliation with the Foundation Service Corporation, and hoped that it would qualify as the intermediary for PL 89-97.

* * *

Five new members were introduced at the November 2 meeting—Drs. Manuel Abundo, Roger B. Brault, Anna Maria Brault, John Paul Clarkin, and Harry H. Nakata. An entertaining program on the "Art of Magic" was

continued page 264

HAWAII MEDICAL JOURNAL / Hawaii Medical Association

MINUTES OF THE COUNCIL MEETING

October 27, 1965, at 6:00 p.m.
Oahu Country Club

PRESENT

O. D. Pinkerton, presiding: Drs. Allison, Andrews, Chinn, Fong, Ivy, Miyamoto, Nishijima, Tomita, and Wallis; plus guests Drs. Raymond T. Eklund, Chew Mung Lum, and Robert T. Wong.

MINUTES

The minutes of the November 17, 1964, meeting were approved as printed in the January-February issue of the JOURNAL.

REPORT OF THE SECRETARY

The report of the Secretary was circulated.

ACTION:

The Secretary's report was filed and the roster changes and waiver of dues were approved as recommended.

REPORT OF THE TREASURER

The Treasurer's report was circulated. Three recommendations were made as follows: (1) That the report be filed; (2) that the Auditor's report be accepted; and (3) that the Treasurer be relieved of supervision of the Physicians' Benevolent Fund except insofar as he is required to be a member of the committee that will administer this Fund, and that the President proceed to appoint this Committee as set forth by the House of Delegates.

ACTION:

It was voted to approve the three recommendations of the Treasurer.

COMMUNICATIONS REQUIRING ACTION

American College of Radiology: On October 8 a cable from AMA advised that the American College of Radiology had mailed a letter to all State and County medical society secretaries and to journal editors calling attention to their new statement of policy. The cable asked that the radiologists receive the full encouragement and support of medical societies in this effort.

ACTION:

It was voted to defer action on this matter; unless HMA has incontrovertible evidence to the contrary, that we support the American College of Radiology on this point.

It was pointed out that this subject will be discussed at the Interim AMA Clinical Convention in Philadelphia.

PKU Law: A letter was received from Dr. Marvin A. Brennecke, dated October 1, 1965, regarding the PKU Law. Dr. Brennecke stated in his letter that the law states that the attending doctor shall see that the PKU test is done. He asked if the attending doctor is liable if a case of PKU develops in which the test was inadvertently omitted during the first few weeks of life.

It was recommended that this matter be tabled until we hear from the Department of Health.

ACTION:

It was voted to answer Dr. Brennecke's letter and inform him that Dr. Bernstein of the Department of Health and the Legislative Committee of the HMA will study the situation.

It was noted that the Department of Health will discuss this matter at its meeting of December 3, 1965, and at which time we will get more information.

REPORTS OF SPECIAL AND STANDING COMMITTEES

Host Committee reports were circulated.

ACTION:

It was voted to go on record as seeing and filing committee reports except for those items which will be brought up for discussion.

Written committee reports were received from all the Councillors except Drs. Tomita and Nishijima. Dr. Tomita gave an oral report on the following committees: Legislative, Maternal & Perinatal Mortality Study, National Legislation, Pharmacy, and Medical Practice Act. The Medical Practice Act Committee has met with representatives of the Attorney General's office, Dr. Bernstein, and members of the Board of Medical Examiners. The subject under discussion is Section "C" of the present law relative to "direction of and supervision of" physicians, Dr. Tomita recommended that this law be given a trial period to see how it works. The National Legislation Committee had not yet met. Dr. Tomita strongly recommends that doctors be urged not to sign any individual contracts under the new medicare law. Dr. Nishijima did not report on his standing committees, which included Arrangements, Convention & Seminar, Publications, Scientific Program & Water Safety.

HMA-HMSA NEGOTIATIONS

Dr. Chew Mung Lum advised that Maui, Hawaii and Honolulu counties have all notified HMSA that they want the Negotiating Committee of the HMA to carry on further negotiations. He also stated that on October 8 a letter was sent to HMSA telling them HMA is ready to negotiate; no answer has been received. It was noted that at an HMSA Executive Committee meeting it was decided that nonparticipating physicians should not be on the Negotiating Committee. Dr. Robert Wong, President, HCMS, said that the membership has concurred in the present make-up of the Committee. Dr. Batten pointed out that these same members with the addition of one new member have been negotiating with HMSA for the past two years and HMSA did not previously bring up this point. Dr. Lum said there are two reasons why HMSA takes this point of view: (1) Nonparticipating physicians do not have the desire to have the county societies and HMSA on good relations; and (2) HMSA does not feel that nonparticipating physicians should have a voice in negotiations since they have no contractual obligations to HMSA. It was pointed out that contractual obligations would be between the societies and HMSA, and not individuals. Dr. Lum also pointed out that HMSA may attempt to form an Association of Participating Physicians.

continued page 266

HAWAII MEDICAL JOURNAL

Notes and News

Professional Moves

We inadvertently missed a few September announcements for the last issue. Our apologies to anesthesiologists **John Takamura** and **Wallis Lewis,** who joined **Clifford Chock** and **Kenneth Chinn** at 1374 Nuuanu Ave.; to surgeon **Livingston Mahn Fong,** who opened at 250 Alexander Young Bldg.; to pediatricians **Donald Pfeifer,** who located at 420 Uluniu St., Kailua, and **John Carr** at 1697 Ala Moana Blvd.; and to **Sakae Uehara,** who became associated with **K. Izumi** and **Lester Kashiwa** in Wailuku, Maui. In October, surgeon **Edward Izawa** opened at the Medical Arts Bldg.; **Herbert K. N. Luke,** occupational medicine, became associated with the Straub Clinic; and **Tommy Chang** moved to 1206 Pensacola. In November, another general surgeon, **Bob Oishi,** moved to Suite 101, Medical Arts Bldg., and **R. S. Pebley** took over **Richard Kainuma's** office at 1734 So. King.

Likeable **Herbert Uemura** is the new pathologist at Children's Hospital and **Robert Bjornson** will be the new radiologist at Maui Memorial Hospital in March. **Kirsten Vennesland** is the new tuberculosis physician at the Lanakila Health Center under **Robert Marks.**

When **Charley Judd** visited Western Samoa in August, the blood of his missionary forebears came to a boil. On December 12, Charley, Mary, and their three children left to take up residence at the 200-bed hospital at Apia for at least a year.

Elected, Appointed and Honored

Eagle Scout **John Stephenson,** who only recently added another merit badge as Chairman of the recent successful Health Fair, is the new chairman of the Health and Safety Committee of the Aloha Council, Boy Scouts of America. We also learned that **Donald Marshall** is adviser for Explorer Medical Post 152, a most unusual branch of the Boy Scouts of America. Most unusual because it has a girls' auxiliary and it is primarily interested in medicine and related fields. Shades of Feminine Mystique—the female infiltration of masculine society is now complete.

We are gaining on the political front. **Clarence Chang** was named to the Board of Regents of the University, **Burt Wade** of Waimea, Kauai, was appointed to the State Board of Health. **Patrick Cockett** of Lihue, Kauai, was appointed to the Advisory Council on Hospitals and Medical Facilities.

Rogers Lee Hill, our drawling homespun philosopher from Alabama, is the new president of the Hawaii Chapter of the American College of Surgeons, succeeding **Shoyei Yamauchi.** The trio, **Roy Iritani, Francis Oda,** and **Richard Mamiya,** were recently elected to the ACS.

John Chalmers was elected Second Vice-President, and **George Mills,** Director, of the Hawaiian Civic Club of Honolulu. **F. J. Pinkerton,** who must have a trophy room full of honorary plaques by now, received still another special plaque from the United Air Lines in recognition of his "special contribution to aviation over a period of three decades." Capable **Ted Tomita** was elected Vice President of the Kuakini Hospital. We wonder how he attends the various committee meetings and still commutes to Waipahu to practice full time **Fred Giles** was one of 26 islanders listed on the roster of the International Platform Association, an exclusive organization whose membership is based on public speaking, writing, and entertainment abilities.

Visiting Professors

During a Thursday conference at Children's Hospital, **Sidney Carter,** Visiting Professor of Neurology from Columbia College of Physicians and Surgeons, had just concluded an exhaustive neurological examination of a 15-year-old boy wearing a baseball cap. He could find no evidence of neurological defect in the postop posterior-fossa-tumor patient. Noting the cap, he asked, "Can you play baseball now?" "No," came the prompt reply. Aha,

RICHARD TOSHIO KAINUMA
1911-1965

Dr. Richard Toshio Kainuma was born of immigrant parents in Waialua, Oahu, on August 31, 1911.

After receiving his early education in the public schools in Waialua, he graduated from the Leilehua High School in 1930. He obtained his B.S. Degree from the University of Hawaii and his M.D. at the School of Medicine of the Tulane University of Louisiana in New Orleans.

Dr. Kainuma interned at the Tri-State Hospital in Shreveport, La. and continued residency training at the Alexian Brothers' Hospital in St. Louis, Missouri, and at the Kuakini Hospital in Honolulu.

On December 7, 1941, he was already on active duty with the Hawaii National Guard, and with the formation of the 100th Infantry Battalion, he was transferred to that outfit, where he served faithfully to the end of the Second World War. He was separated from the service as a Major in the Medical Corps and soon began the practice of medicine at 1734 S. King Street.

Dr. Kainuma loved sports, especially baseball, at which he excelled, earning his letters at the University of Hawaii, while also playing in the Japanese Senior League. He also was an ardent and devoted golfer the last few years, carrying a handicap of from 7 to 10.

Dr. Kainuma was very active in community and medical affairs. He served as a director and chief of the Medical Staff at the Kuakini Hospital, director of the Japanese Chamber of Commerce, and also a director of the Central Pacific Bank.

In April, 1965, Dr. Kainuma suffered a heart attack from which he seemed to be recovering but he passed away on September 3, 1965.

He is survived by his wife Mildred, and son Robert; three brothers and a sister.

TORU NISHIGAYA, M.D.

CECIL A. SAUNDERS, JR.
1919-1965

Cecil A. Saunders, Jr., was born in Los Angeles on October 9, 1919, and came to Honolulu when he was one year of age. He was graduated from Punahou in 1937, and attended college at the University of Oregon, the University of Southern California, and the University of Idaho, from which he graduated in 1944. He attended medical school at the University of Boston and graduated from the University of Southern California's medical school where he received his M.D. He interned at The Queen's Hospital and was in private practice in Honolulu thenceforth. He served in the U. S. Army Medical Corps at Schofield.

He had four children (from his first marriage)—Kathryn Ann (Mrs. Curry Lee) who lives in Honolulu, Barbara Gay Saunders, Cecil Allen Saunders, III, and Stephen Whipple Saunders, who now live with their mother in Salt Lake City, Utah. Barbara Gay is attending Brigham Young University. He was divorced from his second wife, Marjitta, just previous to his death.

Cecil was the son of Cecil A. Saunders, M.D., who practiced medicine in Honolulu from 1920 to 1944. Dr. Saunders was affiliated with Drs. Fronk and Wynn until 1936 when he went into solo practice at the Alexander Young Building until 1944. He moved to San Francisco in 1944 to practice medicine.

M. E. Stevens, M.D.

Sidney thought, perhaps he did miss some residual defect. "Why not?" he inquired hopefully. "It's not baseball season now," came the disdainful reply.

William Fitts, Professor of Surgery at the University of Pennsylvania, expounded the Zollinger-Ellison and dumping syndromes in his booming Tennessee accent, looking more like a heavyweight pugilist than a visiting professor of surgery. A post-gastrectomy patient himself, he certainly is an antithesis of the popular concept that gastrectomy patients are emaciated.

The visiting professor at The Queen's Hospital for November was pedantic **Ralph Dolkart,** Professor of Medicine at Passavant Memorial Hospital, Chicago, who gave esoteric lectures on choriocarcinoma, adrenal cortical dysfunction, aldosterone-secreting tumors, etc. We felt transported back to our med school lecture days.

Harry Swachman, cystic fibrosis expert and Associate Professor of Pediatrics at Harvard, discussed recent advances in the diagnosis and treatment of the disease at a Mabel Smyth lecture. Perhaps we can now find more local cases.

Sportsmen

The term sport is derived from "disport" which means "to carry away (from work)." Any diversion, therefore, can be a form of sport. In this sense, we can include the **Ray deHays** as sportsmen, for they were outplaying (or outbluffing) their opponents in the recent American Contract Bridge League Regional Tournament held at the Hawaiian Village Hotel. **Bruce Joseph** and partner were October winners at the Pali Palms Hotel. On Maui, **Bertram Weeks** and partner placed first in the second game of the November series of the Wailuku Bridge Club.

In an effort to escape the wailing commotion of his office, Hilo pediatrician **Sidney DeBriere** is soloing from the Kailua-Kona Airport for his private pilot's license. He is also a certified medical examiner for the FAA as well as a member of the Civil Air Patrol. Surely, an ideal escape scheme.

Speaking of escape, malacologists **Tom Richert** and **C. M. Burgess** were recently on the motor vessel "Pele," the only shell-dredging vessel in the Pacific area. These chaps escape to the sea bottom for some of those so-called raptures of the deep.

More conventional means of escape are practiced by those ardent fishermen **Dick Sakimoto, Luke Tajima,** and **Edwin Ichiriu** who spin from their haole sampan, the "Kamome." While the rest of us landlubbers bemoan the spiralling price of sashimi around New Year's, these fishermen have no such problem. They are pioneers in the use of spin tackle for bottom fishing even at depths of 600 feet, instead of the traditional handline. In a recent Sunday afternoon expedition off Makapuu Point, Dick

continued page 275

JACOB ROBERT JACOBSON, M.D.
1902-1965

Jacob Robert Jacobson was born on June 15, 1902, in Chicago, Illinois, the son of Samuel and Lillian Chrones Jacobson, both born in Poland. He died of myocardial infarction in Castle Memorial Hospital, Kailua, Hawaii, on December 8, 1965, and was buried in Oahu Cemetery, Honolulu. Surviving him is his wife, Ruth.

He served his internship at the Francis E. Willard Hospital in Chicago 1927-28 and received his medical degree from the University of Illinois in 1928.

Subsequently he was a resident at the John B. Murphy Hospital in Chicago 1929-30, and later served as a senior physician at the Elgin State Hospital, Elgin, Illinois.

He was a Commander in the U. S. Naval Reserve, and saw active service from 1942 to 1946. During part of that time he was stationed at Pearl Harbor and frequently visited the Territorial Hospital at Kaneohe, where he later became clinical director from 1946 to 1949. He engaged in the private practice of psychiatry in Honolulu from 1949 until his death.

He was a member of the American Medical Association, the American Psychiatric Association, and the Western Society of Electroencephalographers, and was certified in psychiatry by the American Board of Psychiatry and Neurology.

His publications included the following: Method of Psychobiological Evaluation, *American Journal of Psychiatry,* November, 1944; Psychobiological Dysfunction in Children, April, 1949, and Psychobiological Dysfunction in Mental Disease, June, 1949, *Journal of Nervous and Mental Disease;* Actinomycosis of Central Nervous System, *JAMA,* 1949.

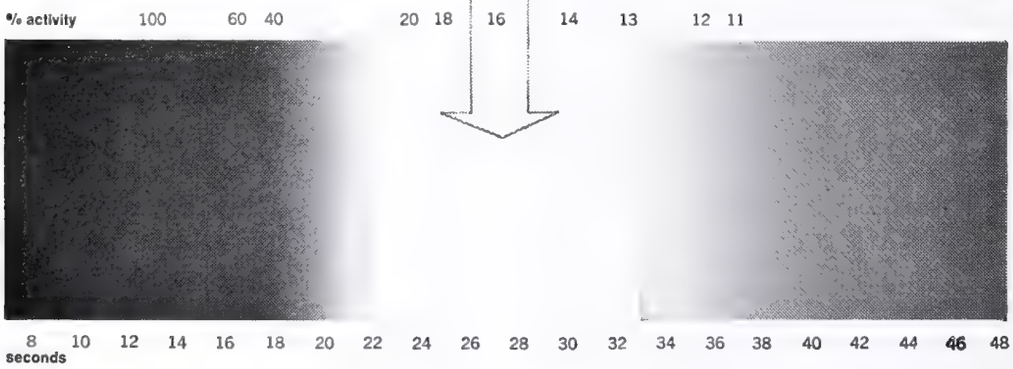
May his soul rest in peace!

Richard D. Kepner, M.D.

in prothrombin time testing

this is the critical range

because it's the safety zone for the patient on oral anticoagulants. To prevent the formation of another thrombus, anticoagulants slow the enzyme reactions of coagulation, by depressing the activity of certain clotting factors. As enzyme activity is reduced, the patient's plasma becomes far more sensitive to minor defects in the test system. Such defects (e.g., smudged glassware or a few degrees difference in temperature) are more apt to cause *longer* times than shorter ones. (An erroneously long time reported to the clinician may result in the patient's dosage being reduced to a dangerously low level.) To reveal defects, the control plasma must react with the same sensitivity as the anticoagulated patient's plasma. If it does not, it will not detect a falsely prolonged prothrombin time.





this is the control plasma that works in the critical range

because, in 1+4 dilution, Diagnostic Plasma Warner-Chilcott reacts with the same sensitivity as the anticoagulated patient's plasma. (Not all control plasmas do. To enhance stability, excess clotting factors are added to some. Even when diluted 1+4 they still have sufficient activity to cause prothrombin times to fall near normal.) Diagnostic Plasma Warner-Chilcott should be run routinely in the normal range (undiluted) and in the therapeutic range (in 1+4 dilution). As a normal control it reveals defects in the test system that could affect normal plasma. As a therapeutic control (because in dilution its enzyme activity is comparable to that of the anticoagulated patient) it reveals defects in the test system that could otherwise falsely prolong the prothrombin time of the patient on therapy.

GENERAL DIAGNOSTICS DIVISION
WARNER-CHILCOTT DIV. MORRIS PLAINS, N.J.



ANY
VACUUM
CLEANER
CLEANS
RUGS,
FURNITURE
AND DRAPES

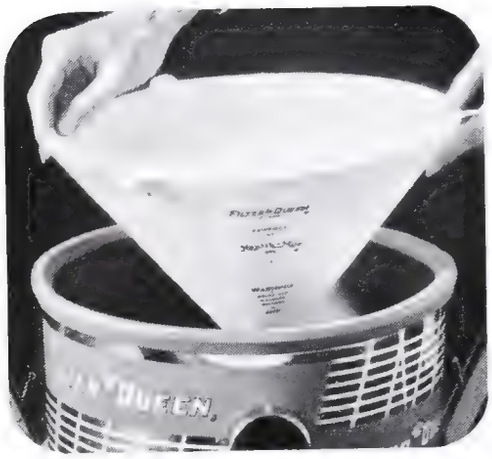


Only
Filter Queen
cleans the
air, too!



Proof? See inside—

DRAMATIC TEST PROVES FILTER QUEEN TRAP



1 Place a fresh Sanitary Filter Cone in the FILTER QUEEN container. (It takes only a moment to open the machine and replace the old Filter Cone.)



2 Now unfold a clean white handkerchief and drop it into the Sanitary Filter Cone. (Even the daintiest, sheerest handkerchief may be used with perfect safety.) Then replace the turret top on the container.



3 Now turn the machine over to any one witnessing the demonstration, and have her start the machine and apply the nozzle to any place where there is obvious dirt and dust. Keep the machine operating for a full minute.

See the proof with the
FILTER QUEEN
"clean handkerchief" test

4 Remove the top of the container, and lift out the handkerchief. You'll find it spotless as it was when it went in! (Where did the dirt go? Look in the bottom of the container.)



DUST AS NO "VACUUM CLEANER" CAN!

Revolutionary...and in a class by itself!

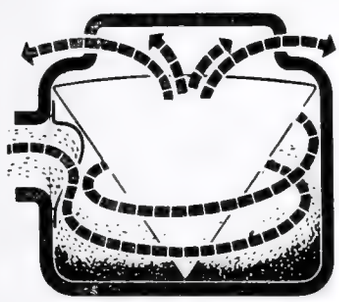
FILTER QUEEN

has the scientific cleaning features that hospitals need most

All "vacuum" cleaners were much the same until the FILTER QUEEN SANITATION SYSTEM was designed. FILTER QUEEN'S patented Sanitary Filter Cone eliminates the need for messy bags, traps practically all airborne contaminants passing into the machine (Harvard Medical School Report in Journal of the American Medical Association, November 25, 1958).*

Experienced hospital housekeepers know this well. That is why FILTER QUEENS have replaced every type of vacuum cleaner in hundreds of hospitals throughout the world.

FILTER QUEEN has no porous bag that permits dust and dirt to reenter the room. FILTER QUEEN operates on an entirely different principle, "Cyclonic Cleaning Action." Here's how it works: Inrushing air, laden with dirt and dust, is deflected by a patented inlet guide as it enters the



container; then is whirled by centrifugal force away from the cone. Dust and dirt are dropped to the bottom of the container. (See illustration.) Air, being lighter, is funnelled to the center of the "cyclone," filters through the Sanitary Filter Cone and returns to the room dust-free.

Why not ask your local FILTER QUEEN Distributor to make the dramatic handkerchief test (pictured at left) in your hospital? There is no better way to prove the improvement in cleaning ability between a FILTER QUEEN SANITATION SYSTEM and any type of vacuum cleaner. (You'll find your distributor listed in the Yellow Pages; or write Health-Mor, Inc. direct).

**We will be glad to send you a reprint of this report on request.*

What hospital administrators say about FILTER QUEEN

"I heartily recommend to any hospital administrator who is presently unhappy with the type of cleaning machine in use, that he try FILTER QUEEN for only two days and the machine will sell itself."

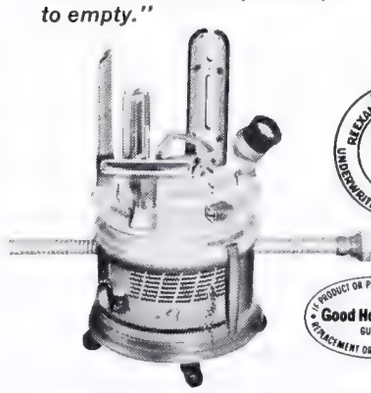
"The FILTER QUEEN is great—a very important factor in patient areas, and is constructed so as to prevent air turbulence of dust at floor level. Filtering of the air, while in general operation, is also a very important and desirable factor."

"One of the most pleasing features of the machine is its quietness. We can even clean in the rooms while occupied by the patients, and many have commented on how pleasant it is not to be disturbed by noisy, old-fashioned vacuum cleaners anymore."

"The air exhaust at the top of the unit is a wonderful feature, and the Sanitary Filter Cone is certainly our answer for working in closely confined patient areas."

"We thought we had a clean hospital and a fairly good method of achieving acceptable sanitation, but this little machine made us revise our thinking and our methods."

"A quiet motor which possesses excellent cleaning power and the convenience of having to clean out the cleaning compartment only once a month, has proved very advantageous. One of the most important points . . . is that there is no bag to empty."



LISTED UNDER RE-EXAMINATION SERVICE UL OF UNDERWRITERS' LABORATORIES, INC.

PRODUCT OR PERFORMANCE DEFECTION ★ Good Housekeeping GUARANTEES REPLACEMENT OR REFUND TO CONSUMER

ACCEPTED FOR ADVERTISING STATE MEDICAL SOCIETIES

FILTER QUEEN

In Canada: Filter Queen Corp., Ltd., 252 Victoria Street, Toronto, Ont. • **In Mexico:** Industrias Filter Queen, S.A., Av. Jardin #330, Col. del Gas, Mexico 15, D.F.

A Product of HEALTH-MOR, INCORPORATED, 203 North Wabash Avenue, Chicago, Illinois 60601

HAWAII TECHNOLOGISTS' BULLETIN

Official Publication of the Hawaii Society of Medical Technologists

Editor: STELLA YOSHIDA, U. S. Army Tripler Hospital

Many of you may remember Rachel West, MT(ASCP), who worked at the Waikiki Medical Laboratory before volunteering her services to USAID. Her assignment is Vietnam. In the following letter Rachel gives you some insight as to the many hardships she has encountered in the laboratory of a backward country.

Da Nang, Vietnam
6 October 1965

Dear Edith and Fellow Technologists:

On October 5, 1964, I arrived in Vietnam. During the past year I have worked six months in the Delta in an agricultural town named Can Tho. In Can Tho we had a fairly large hospital. At this hospital we cared for the city-dwellers of Can Tho and millions of country folks from surrounding areas. The hospital had about a 300-bed capacity but actually bedded nearly 400 patients. Having two or three patients to a bed was common practice. Our surgeons would have liked to do elective operative cases, which were badly needed, but they were overworked on patients with war wounds. In spite of this they did do many beneficial operative cases and saved many lives.

Considering the terrible lack of facilities, the laboratory in the Delta was efficiently operated by four technicians and one American advisor. In this laboratory we tried to practice methods per American standards. This was a constant worry due to the lack of basic facilities. However, we did a fairly good job in hematology, parasitology, chemistry, blood banking, and bacteriology.

After six months there, I was transferred to the coastal city of Da Nang, far up the coast. It was quite a change in climate, terrain, and people. There is no change in the hospital situation, however, the conditions are as crowded as in Can Tho. The people of central Vietnam are different from their southern cousins. It has taken me much longer to get to know these central Vietnamese, but now after many patient hours, I believe they understand that we want to help them. Among my technicians here I have some very bright folks. The schooling here has been haphazard and some of my brighter technicians have no formal certificate nor diploma to prove their worth. All of them have had nursing experience plus several to many years as apprentices in the laboratory. Two of my young men have finished two years training in the Institut Biologique in Saigon. They are well trained in chemistry but lack in bacteriology. All of them speak enough English so that I can converse with them.

In this laboratory we try to accomplish the same work we did in the Delta. However, up here we are constantly out of electricity, water, or both. Have you ever thought to turn on the faucet to check the water supply before you begin a Wright's stain or a Gram stain? This we do so habitually that I am sure I will continue this checking for months once re-established in an American laboratory. Have you ever had an empty blood bank and collected 18 units of blood from hard-to-get donors, to find in the morning, that the refrigerator cut off in the night and the thermometer registers 45°C; the blood as warm as though you were trying to cook it; not knowing how long the heat has been on it; wondering whether you should let the surgeons use it, or throw it out? The decision is soon made for you because the surgeons are crying for 40 units of blood. The surgeon's decision is "better to try than to die." Some live and some die. We never have enough blood. NEVER!!!!

Today this is a minor worry. Along with the other worries, equal to any in a U.S.A. laboratory, we have had to put the blood supply problem aside in a back chamber of our minds and hearts while we gather in patients with swollen glands of the groins. We are in the midst of plague!

Since the first week of September, we have had patients dribble in with complaints of severe headache, fever, and swollen glands. We puncture the glands with needle and syringe and extract fluid which we smear for direct studies and culture on broth and agar. We have only had two deaths from the hospital among many positive cases. We feel we are getting ahead. I never thought I would be called upon to diagnose Pasteurella pestis, but now I don't believe anyone could fool me on it. We are very happy to have the American military interested in the problem. They help our sanitary department track down the areas infested, trap the rats, and spray for fleas. We hope to avoid a real epidemic.



All the above is an introduction to the situation I have found in Vietnam. I don't know your politics, nor much about the feeling of the average American as to our whys or wherefores in Vietnam. I have no political feeling about our losing or winning the war here. The feeling I do have is to help the everyday, ordinary folks (technicians like ourselves) better their situation. My technicians try as hard as they know how to, but their knowledge is limited due mostly to circumstances and lack of facilities. They are all eagerly learning English and aspire to learn more about medical technology. It is these young people who will help their country in the end. I am enclosing some pictures of the situations found here. Unfortunately, the dirt does not show, nor can the smells be portrayed. Neither can the ants which keep tracking up our culture dishes making beautiful patterns of the Staphylococcus and gram-negative bacilli.

I know that our Hawaii Medical Technologists Society has scholarships for deserving students. I don't know whether we can stick our necks out far enough to include foreign students, but if we can, I would like to nominate students for the fields of blood banking, hematology, and chemistry. I haven't anyone right now who would be good enough to tackle the field of bacteriology. If we can help these people by giving, or at least offering, a scholarship to Hawaii to learn a little more, I am sure the rewards will be great. Maybe one of the hospitals would be interested in having a Vietnamese technician as an apprentice on a work-in-return-for-learning basis. I understand that many of the hospitals are shorthanded.

I don't believe anyone has thought of the idea of offering a three-month training scholarship to a lowly washroom attendant. One of my basic problems is finding time and means for teaching cleanliness of glassware both for chemistry and bacteriology. My "janitor" cleaning-man is no dummy. He is responsible for so many duties that I tend to call him "doctor." He doesn't speak English as yet. But, if I could get him to an American hospital cleaning-and-sterilization room for a three-month training program, I would gladly spend time teaching him English during the next twelve months to help him with this program. No matter what I teach concerning cleanliness, they all tend to revert to their original way of doing things. If one of them could really see how particular our hospitals are concerning cleaning methods, he could preach and demonstrate to all the others.

Our "janitor" can't clean a micro-slide decently, but he can and does operate on rabbits, collect G.C. smears on registered prostitutes, draw blood for serology, etc. I don't know what he thinks he can see on a slide without the aid of a microscope. But, while I am looking diligently for Pasteurella pestis he is peering onto the slide from the side at my elbow. I wonder? Maybe I am misjudging him. Maybe he *can* see with microscopic eyes. Anyhow, he surely can tell you whether the swollen gland is from TB or plague. He hasn't missed yet.

You see, our laboratory works quite differently from the American Hospital Association's ideas. Here, the M.D.'s don't see the patient until after the nurses and technicians have diagnosed the case both clinically and by laboratory examinations. Easy for the doctors, I'd say.

All sarcasm and kidding aside, I just thought you folks would be interested in the work we are doing over here. And, if you can come up with any ideas on scholarships for one or more technicians, please let me know. I know that nothing can be completed for this year, nor maybe not by fall of 1966. Could we begin campaigning for one for January, 1967? By that time I am sure I will have at least three young people ready for extra study. They will be well accomplished in English and have enough background in technology to understand basic training and education in their fields. Unfortunately, I don't believe they will have enough academic schooling to be considered as university candidates. I only wish this could be arranged. Could they be accepted as special students in the East-West Center?

I hope you had a successful meeting in June and fared well at the Health Fair in October. I enjoy reading of your activities in the HAWAII MEDICAL JOURNAL. I am looking forward to meeting with you again in 1967. My tour should be up here about October, 1966. If you have any questions on the medical situation in Vietnam, especially concerning the laboratories, please write to ask me. I love talking and writing about it. I think of you often.

RACHEL D. WEST, MT(ASCP)

discussed. New procedures such as the detection of bone metastases with strontium, pulmonary emboli with macroaggregated albumin, and pericardial effusions with cholegrafin, are clearly and comprehensively presented. Methods still in the investigative stages, such as parathyroid scanning, pancreas scanning, and myocardial scanning, are critically discussed, particularly as to their present limitations.

This clearly written and well-illustrated text is highly recommended for the practicing physician. The comprehensive discussions and bibliography are especially of value for physicians utilizing this mode of diagnosis.

WINFRED Y. LEE, M.D.

Synopsis of Cardiology

By William I. Gefter, A.B., M.D., F.A.C.P., Bernard H. Pastor, A.B., M.D., F.A.C.P., and Ralph M. Myerson, B.S., M.D., F.A.C.P., 877 pp., $9.85, The C. V. Mosby Company, 1965.

THIS SYNOPSIS is indeed a handy reference for any clinician who wishes current clinical information about heart diseases. Medical students, interns, and residents will find this a handy supplement during their training years and should have it available on the wards and clinics for quick reference. The selective bibliographies include those published as recently as 1963.

Numerous illustrations are included in the sections of ECG, VCG, roentgenography, phonocardiography, and other graphic methods of recording.

C. S. WAKAI, M.D.

★Rheumatic Fever Diagnosis, Management, And Prevention

By Milton Markowitz, A.B., M.D., and Ann Gayler Kuttner, B.S., Ph.D., M.D., with a special chapter on Community Health Services by Leon Gordis, A.B., M.D., 242 pp., $7.50, W. B. Saunders Company, 1965.

THIS MONOGRAPH is the second in a series on "Major Problems in Clinical Pediatrics." In spite of the many multifaceted problems presented by rheumatic fever, the authors have ably fulfilled the purpose of the series with this practical, concise, and readable volume. It is recommended for all who are interested in the care of children. At the rate of one hour a day, you can read it in ten days.

P. H. F. WATT, M.D.

★New Drugs

Issued by A.M.A. Council on Drugs, 518 pp., $5.00, American Medical Association, 1965.

"NEW DRUGS" IS THE OLD "NEW AND NONOFFICIAL DRUGS" in a 1965 format, and at $5.00 it is a bargain, an altogether invaluable and indispensable antidote to the blandishments of the detail men; you will want it on your desk, not in your library, for frequent reference.

Chapter 1, Antibacterial Agents, discusses them individually at length (with generic names in bold face and proprietary names following in small caps) under Adverse Reactions, Precautions, Pharmacology, Actions and Uses, Dosage, and Preparations. Were you wondering about the colistins? They're here. Is the spate of new penicillins bugging you for fear you're not using the best one for your particular purpose? Pages 9 and 10 will clarify this complex matter for you.

Each chapter deals with a class of drugs—mostly classified by use (anticonvulsants; antiparkinsonian agents; anticoagulants; antineoplastic agents; etc.) but sometimes by nature (hormones, by their names; iron; radiopaque media). The authority of the entire Council on Drugs, as well as that of some 400 consultants, stands behind the statements made.

This book is a three-star special; with it on your desk

HARRY L. ARNOLD, JR., M.D.

★Progress in Atomic Medicine, Vol. 1

Edited by John H. Lawrence, M.D., D.Sc., F.A.C.P., 233 pp., $9.75, Grune & Stratton, 1965.

THIS SET of review papers may be useful to practitioners of general medicine as well as to the specialist in nuclear medicine. It includes discussions of methods currently being used in Hawaii, such as radioiodine in the diagnosis and treatment of thyroid disease, and the status of radioactive cobalt therapy. In addition, it discusses the materials and equipment which will, within the next two or three years, simplify and expand the practice of nuclear medicine here. For example, short-lived isotopes will be obtained by milking "cows" of longer-lived isotopes, allowing larger quantities to be used while decreasing the radiation delivered. The availability of gamma cameras will shorten the time needed for taking pictures of radioisotope concentrations in the body to a few minutes or less, thus opening the possibility of dynamic studies. Anyone interested in the advancing front of nuclear medicine can find it here in easy language.

ROBERT A. NORDYKE, M.D.

★The Management of Fractures and Soft Tissue Injuries, 2d Ed.

By The Committee on Trauma, American College of Surgeons, 365 pp., $7.50, W. B. Saunders Company, 1965.

THE COMMITTEE on Trauma of the American College of Surgeons has made a significant contribution by editing and presenting this combination of subjects in one small text.

This period in our civilization has appropriately been designated by some as the "Age of Trauma." With mechanization and faster and faster travel, and resultant increasing frequency of accidents, it is imperative that the present day physician and surgeon understand the priority and principles underlying the management of acute trauma. Frequently the saving of a life or limb, and the avoidance of complications leading to increased morbidity following trauma, is dependent on the initial rational order of diagnosis and treatment in an expeditious manner.

Much of this text is written in outline form, clearly presenting steps in diagnosis and management in logical sequence. Despite its compact size, it contains a great deal of specific useful clinical information. Most of the material, notably that dealing with the prophylaxis and treatment of tetanus, and management of burns, is up to date. The fracture aphorisms are pertinent and well stated.

I recommend this book for reading by all interns and residents, and interested practicing physicians who deal with injuries. For the novice it will serve as a sound basis and guide, and for the more experienced an aid in organizing and clarifying what they already know, about the management of trauma. This text should be made available in the emergency rooms of all hospitals for quick reference, if needed.

ALBERT C. K. CHUN HOON, M.D.

Chinese Lessons to Western Medicine, 2d Ed.

By I. Snapper, M.D., 416 pp., $12.00, Grune & Stratton, 1965.

THIS BOOK recounts the personal experience of a Western medical clinician at Peiping Union Medical College prior to World War II. As he systematically reviews the various diseases encountered in North China, one gets the im-

continued page 264

Carnation
EVAPORATED MILK



1965
Carnation Healthy Baby Contest
$1,000 1st prize winner,
Laurie Anne Medeiros
of Honolulu, Hawaii

HAWAII'S HEALTHY BABY MILK...

1st CHOICE FOR INFANT FEEDING...
No. 1 in the Islands for generations,
...available everywhere in Hawaii

"from Contented Cows"

Book Reviews *continued from 262*

pression that they are very similar to those in the United States. In some diseases, however, the clinical picture is altered by the geographic, social, and economic environment. These cases present the interesting aspect of this book, and these are lessons in clinical medicine which can be learned.

A chapter of commentaries has been added to this new addition to update discussions, especially on the pathogenesis of diseases. Nevertheless, this book basically represents medicine as practiced in Peiping twenty-five years ago. When future political events permit the Bamboo Curtain to rise, this book will appeal to doctors interested in medicine in that part of the world.

CARL H. LUM, M.D.

Problem Cases from Fracture Grand Rounds At the Massachusetts General Hospital

By William Hamilton Harris, M.D., William Norman Jones, M.D., and Otto E. Aufranc, M.D., 371 pp., $20.00, The C. V. Mosby Company, 1965.

THIS BOOK is based on the cases published as "Fracture of the Month" in the *Journal of the American Medical Association* from July, 1960, to July, 1964.

The symposium as presented will be digested thoroughly by those who are specifically engaged in trauma surgery, particularly, they of the orthopedic and fracture specialties.

The variety of fractures selected are both usual and unusual, designed for free discussion of methods of treatment elected.

EDMUND C. K. LUM, M.D.

Also Received

A History of Pathology

By Esmond R. Long, Ph.D., M.D., 199 pp., $2.00, Dover Publications, 1965.

A PAPERBACK compilation of the major historical events of pathology.

Preventive Medicine, 2d Ed.

Edited by Herman E. Hilleboe, M.D., and Granville W. Larimore, M.D., 523 pp., $12.00, W. B. Saunders Co., 1965.

A COMPREHENSIVE text on the principles of preventive medicine.

Refraction: A Programmed Text

By Robert D. Reinecke, M.D., and Robert J. Herm, M.D., with a foreword by Albert E. Sloane, M.D., 336 pp., $12.50, Appleton-Century-Crofts, 1965.

A CLEARLY written programmed text of eye refraction.

Modern Treatment, Vol. 2, No. 3

By Thomas F. Frawley, M.D., and Henry C. Cleveland, M.D., $16.00 per year, Hoeber Medical Division, 1965.

THIS IS a bimonthly journal. This issue is devoted to treatment of diabetes mellitus and emergency treatment of trauma.

★Mother To Be

By Carlo Valenti, M.D., foreword by Louis M. Hellman, 156 pp., $3.95, Appleton-Century-Crofts, 1965.

THIS CONCISE, clearly written text would be appreciated by many mothers to be. It discusses the diagnosis of pregnancy, the course of pregnancy, labor, and convalescence. A helpful adjunct for the busy practitioner.

★The Hormone Quest

By Albert Q. Maisel, 262 pp., $5.00, Random House, 1965.

THE HISTORY, written for the intelligent layman, of the search for synthetic hormones and hormone substitutes, by a master of science writing.

★Progress in Radiation Therapy, Vol. III

Edited by Franz Buschke, M.D., with 15 contributors, 242 pp., $14.00, Grune & Stratton, 1965.

FIFTEEN RADIOLOGISTS and others present in 234 pages and an index What's New in Radiation Therapy. Indispensable to those doing it.

The Doctorate (A Handbook)

By George K. Schweitzer, Ph.D., Sc.D., 106 pp., $4.75, Charles C. Thomas, 1965.

THIS IS MOSTLY about the other kind of doctors, the kind who don't, as a renowned physicist's housemaid once put it, "do anybody any good."

Studies in Epidemiology (Selected Papers)

By Morris Greenberg, M.D., 418 pp., $8.50, G. P. Putnam's Sons, 1965.

THE METHODS AND CONTRIBUTION of epidemiology are well presented in this text written primarily for students of the health sciences. ■

County Society News *continued from 252*

presented by Lt. Col. Harvey P. Graham, MC, USA, and Jimmy Kane.

Announcements were made relative to the forthcoming diabetes detection drive, American College of Surgeons lecture, Medicine & Religion program, Community Chest Drive, and status of HMSA negotiations. Dr. Richard E. Ando presented the 1966 Budget, which was approved. The Nominating Committee's report was presented and the following nominations were made from the floor: Keith F. O. Kuhlman for Secretary; James W. Cherry for the Alternate Board of Directors; C. C. McCorriston for the Medical Practice Committee; B. A. Richardson, James W. Cherry, Maurice A. deHarne, Robert T. Wong, Mor James McCarthy, and George Ewing for delegates to the HMA; and Harry L. Arnold, Jr., for alternate delegate to HMA.

Kauai

The business portion of the June 17 meeting was deferred in order to devote all the time to scientific subjects. Dr. Stanley Wright was the guest speaker. He spoke on the "Clinical Aspects of PKU in the Detection of Birth Defects" and told of the vast amount of research which is being done in this area today.

One guest, Dr. Hemmat, was present at the August 3 meeting. Dr. John de La Salle Morris was elected to active membership. It was reported that no request for transfer had been received from Dr. Warner.

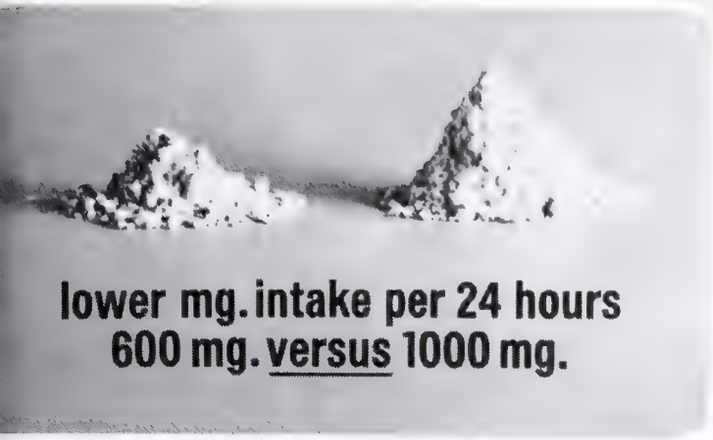
Action on the compulsoy PKU testing program was tabled pending receipt of more conclusive information. It was voted to circulate copies of the AMA House of Delegates' 1965 actions. It was voted to invite physicians from Tripler General Hospital to serve locum tenens on Kauai.

Reports on HMA Committee meetings were read. A letter from HMSA relative to the current fee schodule for T&A's was read. No action was taken. An offer of reprints from the National Foundation will be circulated so members can indicate their choices.

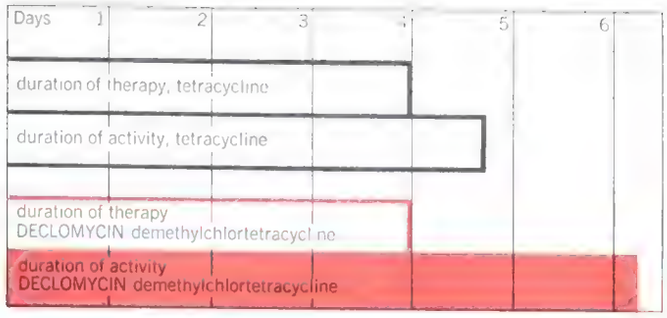
The fee-for-service charges of the Mental Health Division for diagnosis and treatment were discussed. It was voted to refer this matter to the HMA for clarification.

At the September 14 meeting Dr. R. J. Emrick recommended the following procedures for PKU testing: (1) The laboratory departments of all hospitals will collect samples for testing prior to the newborn's discharge from the hospital. (2) The laboratory will then forward the specimens to the Health Department laboratory. (3) Ma-

continued page 266

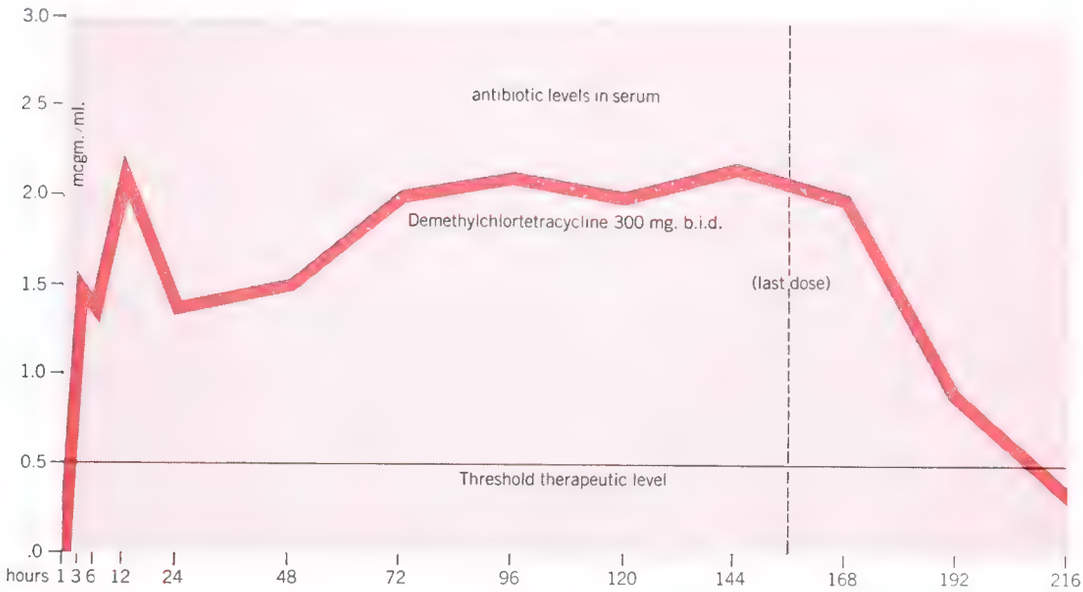


lower mg. intake per 24 hours
600 mg. versus 1000 mg.

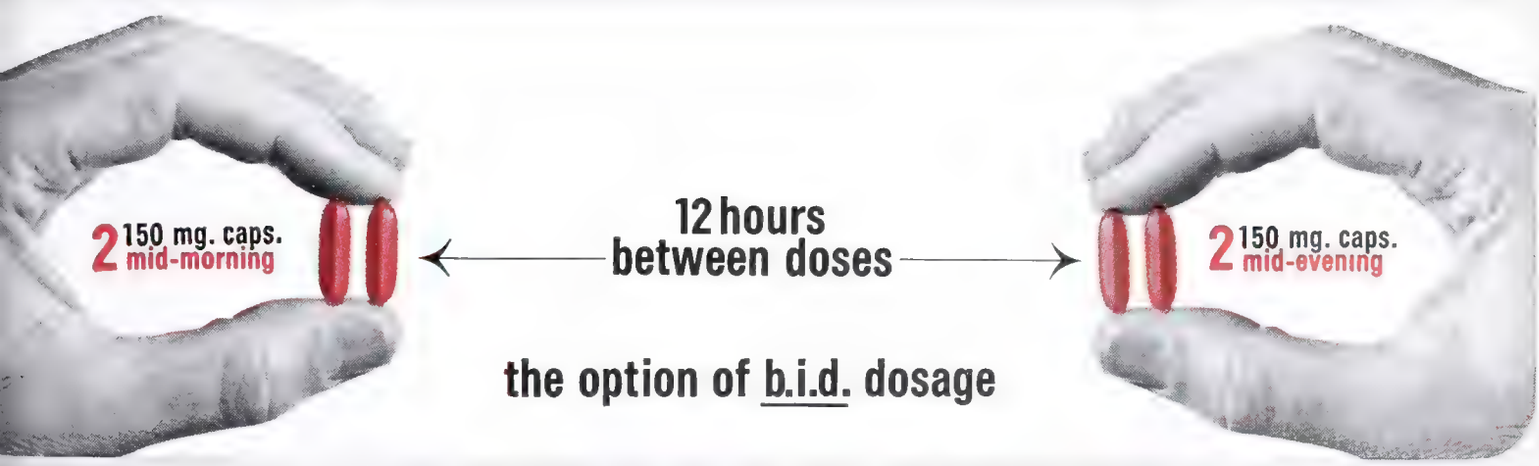


1-2 days' "extra" activity

higher activity levels than other tetracyclines— with less peak-and-valley fluctuation



From Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.; Amer. J. Med. Sci. 243:296 (Mar.) 1962



the option of b.i.d. dosage

ne "extra" benefits raise the evel of antibiotic control

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
150 mg. CAPSULES

ective in a wide range of everyday infections—respiratory, urinary ct and others—in the young and aged—the acutely or chroni- ly ill—when the offending organisms are tetracycline-sensitive.

le effects typical of tetracyclines include glossitis, stomatitis, ctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nsusceptible organisms, tooth discoloration (if given during th formation) and increased intracranial pressure (in young ants). Also, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. Because of reactions to artificial or natural sunlight (even from short exposure and at low dosage), patient should be warned to avoid direct exposure. Stop drug immediately at the first sign of adverse reaction. It should not be taken with high calcium drugs or food; and should not be taken less than one hour before, or two hours after meals.

Capsules, 150 mg. and 75 mg. of demethylchlortetracycline HCl. *Average Adult Daily Dosage:* 150 mg. q.i.d. or 300 mg. b.i.d.

EDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York 10965
Lederle
8035-9720

County Society News *continued from 264*

terials for testing (obtaining of samples) and mailing containers have been furnished by the Health Department. It was voted to approve the procedure as recommended.

It was voted to request five sets of reprints from the National Foundation—one for each hospital library, one for Lihue Plantation Dispensary, and one for Waimea Dispensary. Dr. Amir Hemmat was accepted as a new member. HMA committee reports discussed included those of the Medical Practice Act Study Committee and the Medical Care Plans and Fees Committee. It was voted to request two films from Ayerst Laboratories. Dr. Peter Kim was named chairman for the 1965 Diabetes Drive. A film on "Atherosclerosis, Estrogen Therapy" concluded the meeting.

* * *

At the October 5 meeting it was voted to have the Secretary contact the clergy to determine whether they would be interested in hearing Dr. McCleave and to advise the HMA that the Society regrets that because of its program calendar it would be unable to meet with Dr. McCleave.

Dr. Boyden reported on discussions with HMSA's Medical Director relative to the contract. The question arose relative to whether there should be a different value for neighbor islands. The unit value for doctor office visits was reported as being between 4.5 and 5, with the majority in favor of 5.0. It was recommended that a November dinner meeting be set up with the HMSA representatives. It was voted to instruct the Secretary to write HMSA and state that the Society was in favor of and had adopted the Relative Value Schedule as the basis for payment, and that the unit value should not be negotiated between the Society and HMSA. It was voted to accept HMSA's new three-times-a-month payment plan.

Your stationery is a reflection of you... be certain the reflection is good!

star-bulletin printing company



the hallmark of fine printing in honolulu

Utilization committees in hospitals were discussed. The question arose whether the county society was required to have a utilization committee. It was noted that each hospital has a committee organized and functioning. The Secretary was asked to write the Hawaii Hospital Association and arrange for a speaker on Hospital Law. It was voted to invite the HMA President and President-elect to a dinner meeting at the Kauai Surf Hotel in November. It was noted that Dr. Morton Berk had indicated he would like to meet with the doctors to discuss the correct procedures involved in completing the disability claim forms. The forthcoming HMA Council meeting was discussed.

It was voted to instruct the Secretary to write the American College of Surgeons to procure reprints and posters for hospitals, dispensaries, and offices relative to the newly established principles relative to the treatment of tetanus in wound management. Dr. Kim reported that Federal grants for the establishment of a cancer cervical smear program were available. It was felt that because of the distance between hospitals and nonavailability of a single man to man such a clinic, the establishment of a clinic was not feasible. If it can be arranged, Federal money may be requested for the procurement of supplies, etc., and the doctors would take the smears as a regular practice in their offices. The government physicians would be responsible for indigent patients. The meeting adjourned after the showing of a movie on PKU.

* * *

Special guests at the November 2 meeting included Drs. O. D. Pinkerton, T. T. Tomita, George Mills, and E. B. Payne plus Mr. John Horty and Miss M. Bayard. The method of handling Pap smears was again discussed and Dr. Payne advised that the Department of Health was in favor of taking Pap smears in the office and the slides should be sent to Dr. Emrick for examination. The fee, based on the customary fee for an office visit and laboratory service, is $8, of which $4.50 or $5 is to be allocated for the laboratory charge. The cost of materials would be for the slide only and supplies normally used in the office. There will be three forms, one for the attending physician, one for the pathologist, and one for the Health Department. Dr. Wallis' report of the Council meeting was deferred in view of the number of special guests present. The balance of the meeting was devoted to the reports of the special guests. ■

Hawaii Medical Assn. *continued from 253*

UNFINISHED BUSINESS

Invitation to AMA to Hold Clinical Convention in Honolulu. The issuance of this invitation has been delayed pending availability of facilities. It would now appear that by next year the Ilikai will have facilities that meet the AMA requirements for a headquarters hotel.

ACTION:

It was voted to ask AMA to hold a clinical convention in Honolulu at their earliest convenience.

Pension Fund. The Pension & Investment committee has selected Hawaiian Trust Company to administer the Pension Fund which is now in the hands of the actuaries, Wyatt & Co. The Council is asked to confirm this choice by adopting the following resolution:

> Pursuant to the authority vested in it, the Council does resolve and hereby authorizes and directs to be adopted a Pension Plan as outlined in the May 11, 1965, letter of Wyatt & Co., and further authorizes the implementation of this plan through the Hawaiian Trust Company at the earliest possible moment.

continued page 268



Butazolidin® alka

phenylbutazone	100 mg.
dried aluminum hydroxide gel	100 mg.
magnesium trisilicate	150 mg.
homatropine methylbromide	1.25 mg.

Usually works within 3 to 4 days in osteoarthritis

The trial period need not exceed 1 week. In contrast, the recommended trial period for indomethacin is *at least 1 month.*

That's why it's logical to start therapy with Butazolidin alka—you'll know quickly whether or not it works. And usually, it will.

A large number of investigators have reported major improvement in about 75% of cases. Some patients have gone into remission. Relief of stiffness and pain may be followed quickly by improved function and resolution of other signs of inflammation. And Butazolidin alka is well tolerated, especially since it contains antacids and an antispasmodic to minimize gastric upset.

Contraindications
Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile, or when other potent drugs are given concurrently. Large doses are contraindicated in patients with glaucoma.

Precautions
Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Make regular blood counts. Use greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy.

Adverse Reactions
The most common are nausea, edema and drug rash. Hemodilution may cause moderate fall in red cell count. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Dosage
The initial daily dosage in adults is 300-600 mg. daily in divided doses. In most instances, 400 mg. daily is sufficient. When improvement occurs, dosage should be decreased to the minimum effective level: this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

Also available: Butazolidin®,
brand of phenylbutazone
Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York BU-3804 P

Geigy

ACTION:

It was voted to adopt the proposed resolution.

Legal Legislative Counsel: The House of Delegates at its last meeting was asked to approve retention of Mr. Edwin Honda as the HMA's Legislative Counsel. The House deferred action and voted that "The Association retain a legislative counselor to be determined by the Council." Mr. Honda submitted his contract for the 1965-66 period and it was reviewed by the Council.

ACTION:

It was voted to accept Mr. Honda's contract as presented.

Next Council Meeting: There was considerable discussion about holding a Council meeting and scientific session on one of the neighbor islands and also about having a Council meeting in conjunction with a scientific meeting.

ACTION:

It was voted that the Council have its next meeting on one of the neighbor islands and that the selection of the site be made by the President of the HMA.

It was moved and seconded the Council strongly recommend to the President of the HMA that the meeting of the Council be held at the Mauna Kea Hotel on the Island of Hawaii. The motion was carried unanimously.

Physicians' Benevolent Fund: The modus operandi for the Physicians' Benevolent Fund was reviewed. The figure originally suggested as a minimum amount for the corpus of the fund was $25,000.00. The Council is asked to vote on whether when $25,000 is reached if the committee should be set up as provided and disbursement made as if required. The Treasurer pointed out that $25,000 is not enough at the present time and he recommended that the Council increase this figure to $50,000.

ACTION:

It was voted to have this matter referred to the Pension and Investment Committee for study of the future role of the PBF.

NEW BUSINESS

Appointment of fiscal agent for the voluntary health insurance portion of PL 89-97: Many organizations are seeking the appointment of fiscal agent for the voluntary health insurance portion of PL 89-97. One of the organizations being considered is Foundation for Medical Care Service Corporation, a mainland corporation of Foundation Plans. Honolulu Foundation for Medical Care, which includes members from all six islands, has joined this corporation. The Council is asked to give its official approval to the Foundation for Medical Care Service Corporation as fiscal agent for PL 89-97 in the State of Hawaii.

ACTION:

The Council voted to approve the Foundation for Medical Care Service Corporation as fiscal agent for PL 89-97 in the State of Hawaii.

Appointment of an Attorney for HMA. The HMA is the only state medical association which does not have an attorney on either its staff or on a retainer basis. The Honolulu County Attorney, Mr. V. Thomas Rice, has been most generous with his time and has frequently given free counsel. The AMA from time to time asks that the Association's attorney provide information to

continued page 272



These glasses are important to him—in his work, socially, and in terms of his physical well-being.

When's the last time you had an eye check? Schedule an appointment soon with your eye physician.

OBRIG Contact Lenses fitted by prescription. We are GUILD OPTICIANS, serving Hawaii since 1939.

GUILD OPTICIANS

OPTICAL DISPENSERS

of Hawaii, Inc.

1133 BISHOP ST. **576-570**
312 ALA MOANA BLDG. **976-925**

MEDICAL PLACEMENT BUREAU and NURSES' REGISTRY

24 HOUR SERVICE

LET US SERVE YOU IN YOUR NEED

Nurses, Staff and Office
Nurses, Private Duty
Nurses, Supervisors
Practical Nurses
Nurses, Aide
Dental Assistants
Physical Therapists
X-Ray Technicians
Laboratory Technicians
Medical Stenographers
Medical Clerks
Receptionists
Male Nurses
Bookkeepers
Home Companions

Frieda M. Beezley, R.N., *Director*
Patsy Harrison, *Secretary*

1473 South King St. **991-237**



The Pain Is Gone

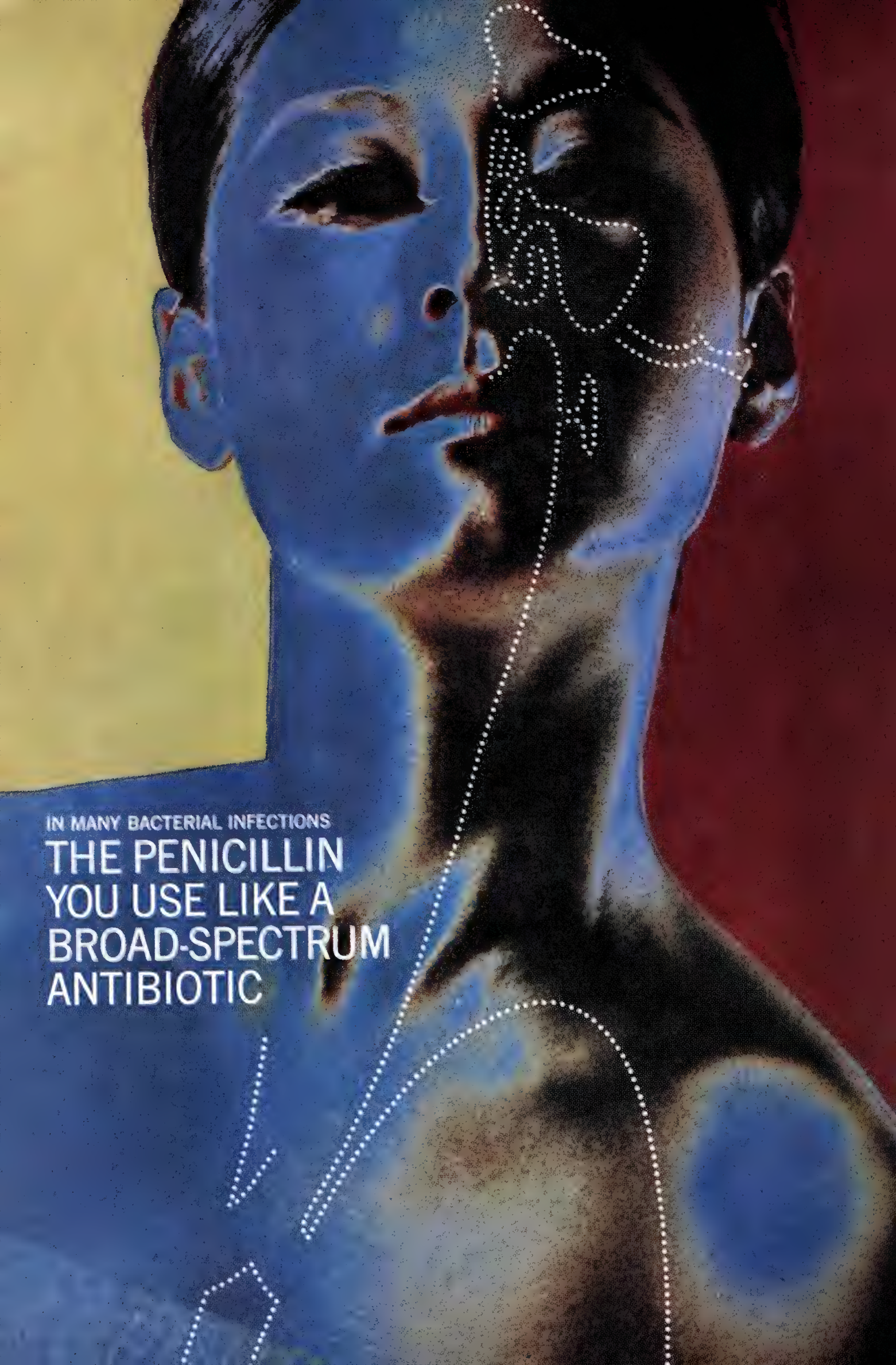
Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.


IN MANY BACTERIAL INFECTIONS
THE PENICILLIN
YOU USE LIKE A
BROAD-SPECTRUM
ANTIBIOTIC

NOW BASIC BACTERICIDAL ANTIBIOTIC THERAPY IN RESPIRATORY INFECTIONS

Instead of tetracyclines or chloramphenicol—instead of erythromycin or triacetyloleandomycin—you can now treat bacterial infections with the first broad-spectrum penicillin—Polycillin.

Unlike these other agents, which are primarily bacteriostatic, Polycillin is bactericidal.

As a broad-spectrum antibiotic, Polycillin is not only active against Gram-positive organisms, but its activity against Gram-negative organisms (such as H. influenzae and E. coli) "...is considered to be greater than that found with tetracycline and chloramphenicol."[1] *Note, however, that Polycillin is not indicated in resistant staphylococcal infections.*

Polycillin poses little risk of toxicity, an advantage not shared by older broad-spectrums; it is as safe and well-tolerated as the traditional penicillins.

Because it combines safety with bactericidal effectiveness against D. pneumoniae, streptococci, and H. influenzae, Polycillin is basic therapy in bronchitis, sinusitis, pneumonitis, otitis media, tonsillitis and pharyngitis.

In over 500 such cases in which complete data were available, Polycillin effected cured or improved responses in 95%![2] And of all bacterial infections—respiratory, g.u., g.i., etc.—treated with Polycillin during the past four years (over 2,000 cases in which complete data were available), 87.8% were cured or improved.[2]

In your next patient with respiratory infection, Rx Polycillin, 250 mg. *q.* 6 *h.* (average dose).

AVAILABLE: Polycillin Capsules and Oral Suspension. ALSO: Polycillin-N™ For Injection (sodium ampicillin), for I.M. or I.V. use.

References: 1. Brown, D.M., and Acred, P.: Brit. M. J. 2:197 (July 22) 1961. 2. Based on published reports and data on file at Bristol Laboratories.

Bristol Therapeutic Summary:

For complete information consult Official Package Circular.

Effectiveness: Polycillin (ampicillin trihydrate) is clinically effective in the treatment of infections of the respiratory, genitourinary and gastrointestinal systems caused by susceptible Gram-negative bacteria. Although clinical studies have demonstrated it to be effective in the treatment of infections caused by susceptible Gram-positive organisms, its relative effectiveness compared to that of older penicillins, in these infections, has not yet been established.

Side Effects: Infrequently, skin rash, pruritus, urticaria, gastrointestinal disturbances (nausea, vomiting, diarrhea) and anaphylactic reactions.

Precautions: Allergic responses may occur, particularly if there has been prior allergic sensitization to penicillin or other allergens. Superinfection with nonsusceptible organisms may occur during therapy.

Usual Dose: Adults 250 mg. or 500 mg. *q.* 6 *h.* (according to infection site and offending organisms).

BRISTOL

Bristol Laboratories
Division of Bristol-Myers Co.
Syracuse, New York

Polycillin

(ampicillin trihydrate)

them, and this work has been passed on to Mr. Rice. Although Mr. Rice has been most cooperative, it has been felt by some that it is unfair to continue to seek his services without offering him any compensation. The Council is asked to approve expenditures up to $350 for legal advice and to name Mr. Rice the Association's attorney. This amount would cover telephone-type consultations and is figured on roughly ten hours of services. It would not cover lengthy legal research or counsel in court cases.

ACTION:
It was voted to approve expenditures up to $350 for legal advice and to name Mr. V. Thomas Rice the Association's Attorney.

Appointment of HMJ Editor: The new Bylaws require that the Council appoint the Editor of the HAWAII MEDICAL JOURNAL on an annual basis. The Publications Committee recommends that Dr. Harry L. Arnold, Jr. be reappointed.

ACTION:
It was voted to reappoint Dr. Harry L. Arnold, Jr., as Editor of the HAWAII MEDICAL JOURNAL.

Election of HAMPAC Board: The Bylaws of HAMPAC require the Council to elect its Board Members. Members whose terms expired last February are Mrs. Donald A. Jones, Drs. James Matayoshi, Maurice A. de Harne, and John F. Chalmers. The Bylaws require that the Board consist of one member from the Woman's Auxiliary and at least one member from each senatorial district. Suggested nominees to fill the vacancies are Dr. John Chalmers to succeed himself, Mrs. Charles Yamashiro to succeed Mrs. Jones, Dr. Mor J. McCarthy to succeed Dr. de Harne, and Dr. Robert M. Miyamoto to succeed Dr. Matayoshi.

ACTION:
It was voted to elect all nominees proposed to serve on the HAMPAC Board.

Attendance at Committee Meetings: Dr. O. D. Pinkerton urged all Councillors to attend meetings of the committees to which they are assigned.

Publication of a Roster: The feasibility of publishing a membership roster similar to the one San Diego puts out was discussed. It was noted that a number of members have requested that HMA publish a roster. It was felt that this would be a good idea because most doctors, especially those on the neighbor islands, do not know all the physicians practicing in Hawaii. It was noted that members of the HMA would not have to buy this roster.

ACTION:
It was voted to publish a roster of physicians.

Research and Planning Committee: The President advised he is considering the establishment of a committee to look into the future of medicine. In other state associations this type committee has been called a research and planning committee. Some items which have been suggested as study projects include closed panels, groups, hospitals, communications between the University and medical profession, adequacy of physicians, physician education, etc. Suggestions from the Council on other subjects and on the make-up of such a committee were solicited.

ACTION:
It was voted to appoint an ad hoc committee to investigate the composition and function of

continued page 275

CUTEST UNIFORMS

Where Fashion is Foremost with Women in White

GOOD SERVICE IS UNIFORM WITH US

★

Our New Location is at

1969 S. KING ST. • PHONE 964-886

New Proprietor

Mr. Arthur M. H. Chung

★

We Carry All Name Brand Uniforms and Also Doctors' Jackets and Smocks

★

We Specialize in Custom Made Uniforms

BALDNESS FOLLOWING A SEVERE ILLNESS



Cases of alopecia areata or totalis have been aided by our wigs.

"My daughter's hair fell terribly after a fever and despite 'treatments' nothing happened, my M.D. suggested you. I find the hairpiece you made fits perfectly and looks so natural I am almost convinced it's real. My daughter's hair is growing back now."

THE HAIR CLINIC

Hawaii's Only Wigmakers

1724 Kalauokalani Way, Honolulu

(Across from Murphy Motors on Kapiolani)

Hrs. weekdays 10-5; Sat. 8:30-1. • Tel. 900-165 994-237

THREE TIMES A YEAR

Your patients without a plan to economically protect them when they are in need of medical assistance may join Hawaii's own community service medical plan on an individual basis three times a year.

Membership is open to qualified individuals of all ages in

MARCH — JULY — *and* — NOVEMBER

HMSA is a non-profit, community service organization. As such it is able to provide tremendous benefits for reasonably low dues.

HMSA is the medical plan which gives you free choice of doctors and hospitals — an extremely desirable feature.

Member of Western Conference of Prepaid Medical Service Plans

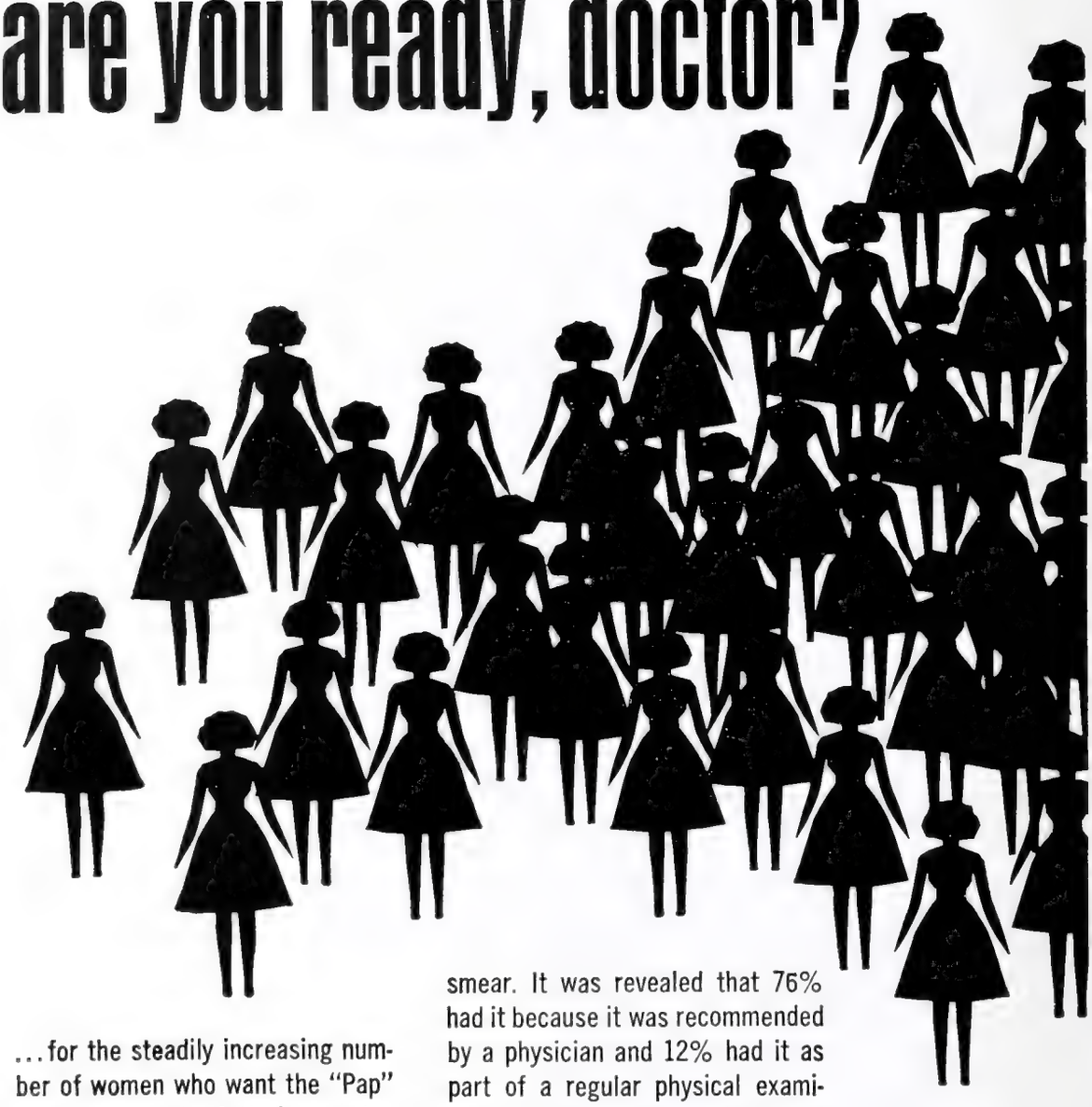


® BLUE SHIELD PLAN FOR HAWAII

HAWAII MEDICAL SERVICE ASSOCIATION

For 25 Years – Hawaii's Own / Hawaii Owned

are you ready, doctor?



...for the steadily increasing number of women who want the "Pap" smear as part of their regular checkups? By 1961, the number who had this cytologic examination had climbed to an estimated 10,000,000!

While the educational program conducted by the American Cancer Society has succeeded in alerting women to the vital importance of the "Pap" smear, it is the physician who plays the key role. This was confirmed in a recent survey of women who had had the "Pap" smear. It was revealed that 76% had it because it was recommended by a physician and 12% had it as part of a regular physical examination. Thus a total of 88% had it because of physicians' actions.

As the number of uterine cytological examinations rises, the death rate from uterine cancer declines. Many authorities estimate that most deaths from this disease could be eliminated if these examinations were routinely performed. More and more women are ready for it and are willing to budget time and money for it. Are you ready for them, doctor?

AMERICAN CANCER SOCIETY

Hawaii Medical Association *continued from 272*

this committee before it is incorporated as a standing committee as constituted in the Bylaws.

* * *

It was suggested the shortage of doctors in rural areas would be an excellent subject for the planning and research committee.

HEALTH FAIR:

A resumé of the Hawaii Health Fair was given by Dr. Ivy. He said the question now is how often we should have a Health Fair. It was felt that we should wait until all the questionnaires which were sent out to the exhibitors are returned before making a decision. This mimeographed resumé will be circulated to the members of the Council and Public Relations Committee.

The meeting was adjourned at 11:00 P.M.

RANDAL A. NISHIJIMA, M.D.
Secretary

Notes and News *continued from 255*

Sakimoto's group landed 227 aku and kawakawa in 3½ hours, using spin tackle only.

Another ardent fisherman, **William Goodhue** of Kauai, won the Kawakawa Cup, the Hawaii Big Game Fishing Club's perpetual trophy for 1965, with his 13¾ pounder, and the Largest Fish on Light Tackle trophy with his 60½ lb. ahi.

The turf-digging crowd, hampered by inclement weather and muddy fairways, had little opportunity to play. At the Oahu Country Club in October, **Fred Warshauer** tied for first in A Flight with 3 up in match vs. par. At the Waialae in November, **Ted Tomita** took Class B Stableford while **Mac Mitsuda** and partner finished first in the team Stableford. In December, **Tom Minn** and partner won the team medal prize and **Sam Yee** tied for first in A flight Stableford. On Maui, **Seiya Ohata** posted a 59 net to tie for first place in the Maui Country Club's best 16 holes tournament while **William Patterson** trailed with a 62. We give fair warning to Honolulu golfers when they venture to the other islands that these outer island golfers may be using a handicap system other than ours.

President **A. S. (Bill) Hartwell** announced that the board of directors of the Waialae Country Club voted to hold the 1966 Hawaiian Open on their course. With the tournament to be held one week before the International Golf Association matches in Tokyo, it is expected that the top two players from most nations of the world will stop here to compete for the expected $75,000 purse.

At the Ala Wai, deserving winner **Paul Tamura** won the B Flight trophy for November-December, proving that he was the best mudder. Slamming **Herbert Takaki** was the second best mudder. **Hideo Oshiro,** who secretly lifts barbells so he can powder the balls, won the Presidential Trophy.

Francis Wong, recently re-elected as president of the Big Island Amateur Boxing Association, also copped the Wanderers Golf Club turkey tournament with 81-14-67.

Our "up and coming" (or gone) tennis duo of **Leabert Fernandez** and **Yutaka Yoshida** lost two recent matches at the Iolani tennis courts, but managed to upset the **Charley Ching–Ben Tom** duo in a private match. Said Yutaka after the match, "Charley and Ben may be ready for us in another five years. . . ." Yutaka recently was ranked fifth in 45-and-over singles. Members are encouraged to dust off their tennis rackets for the coming HMA tennis tournament, sometime in May, which is being organized by **Fred Gilbert.**

continued page 276

A Few Choice

MEDICAL SUITES

AVAILABLE FOR LEASE

in

KAILUA PROFESSIONAL CENTER

(occupancy March '66)

The Kailua Professional Center, located in the heart of Kailua town, is a newly constructed, modern, six floor fully air-conditioned building with one for one parking for individual suites. Unlimited municipal parking is adjacent.

please direct all inquiries to:

COLIN DE SILVA, Executive Vice President

SUITE 1416, ALA MOANA BUILDING **PHONE 90-948**

We note that **Richard You,** fight manager for John Santos, placed his fighter on a special reducing low-residue diet and worked on him to develop a new atomic punch for the match with Paul Fujii. Santos, however, injured his right hand knuckle and could not demonstrate his lethal atomic punch, but still won a unanimous decision, thus proving the potency of the low-residue diet. Richard, Secretary of the US Olympic Weightlifting Committee for the past four years, was elected to serve another four years.

Members Speak Up

A physician is often measured by the number of papers he gets accepted by the medical journals, and properly so. We who deal with the living, unlike artisans, engineers, and architects who mold the inorganic, have naught to show for our efforts when the living die, except for memories which fade all too quickly. We can only resort to literary efforts which, even if they lie unread on dusty shelves, still add some measure of permanency. In this vein, we congratulate the following: **Millard Seto** *et al.* for "Amniotic Fluid Embolism with Placenta Previa, and Cesarean Section—A case report and clinical review," *Pacific Medicine & Surgery* (July-August, 1965); **J. E. Strode** for "Reminiscences of a Surgeon at Pearl Harbor," *Review of Surgery* (July-August, 1965); **Richard Kelley** for "Radioactive Rose Bengal Test in Diagnosis of Liver Disease," *Current Medical Digest* (September, 1965); **C. S. Judd** and **Kazushi Tanaka** for "Technic of Pyloroplasty for Duodenal Ulcer: Anterior Hemipylorectomy for Drainage of the Stomach," *Annals of Surgery* (November, 1965); and **Robert Nordyke** for "Surgical vs. Non-Surgical Jaundice," *JAMA* (November, 1965).

Marion Hanlon on Maui preached on "Christ Is Able" at the Kula Bible Church.

Charley Judd, member of the Medicine and Religion Committee, met with Judge Gerald Corbett, and Nathaniel Miller of the Jehovah's Witness, to discuss blood transfusions. Charley restated the physician's stand that "In a life or death situation, where there is a great loss of blood, a doctor would take the responsibility of administering a transfusion. His primary purpose is to save the life of the patient." A most noble thought.

When asked about the physicians' stand and Medicare, HMA President **O. D. Pinkerton** made no secret of his distaste for the impending program, but felt that generally speaking Hawaii's 1,000 physicians will cooperate. Controversial **Willis Butler,** however, not only supports the Federal Medicare program, but feels that it is not strong enough. At the opposite pole are **Fred Reppun** and **Rodman Miller,** who are vehemently opposed to the program, are eager to ignore it, if at all feasible. Whereas Rodman admits his mind is not 100 per cent made up and he has no desire to be a martyr, Fred is wrestling with his conscience, and with his usual rhetoric feels that the government should allow the doctor-run Foundation Plan to process payments. "Like Mary Poppins, that plan may be like a spoonful of sugar that'll make the medicine go down."

John Watson spoke at the Honolulu Memorial Society on the Deafness Research Foundation and explained how persons with hearing loss may donate their temporal bones (after death, of course) to help researchers learn the cause of deafness. The Society apparently backs assorted types of medical research such as donation of temporal bones for hearing research, eyes for corneal transplants, and bodies for medical research.

During a panel discussion at St. Andrew's Cathedral on the purveying of obscene literature to children, **Shepard Ginandes,** representing the Mental Health Association of Hawaii, felt that "Pornography used in the right way can prevent many sex offenses. Through it, a person may hit the 'safety valve' which enables him to find pleasure, rather than lead to a possible attack on another human being." First it was contraceptive pills for teenagers, and now this. How far should we go in liberalizing sex education?

Personal tension was the subject matter at a Central Union Church forum where **Walter Char, Morton Berk,** and **Dorothy La Fon** were speakers. Especially in view of the number of physicians suffering heart attacks recently, who could be better qualified to discuss the subject of tensions than physicians themselves?

Keith Kuhlman became a member of the International Medical Association of Lourdes, the famous pilgrimage spot in France, during a visit in 1958. He recalls an actual case he examined at Lourdes Hospital, but does not feel that it can be properly classified as a miracle. An American woman tourist with x-rays and a history of lung cancer immersed herself three times in the springs at Lourdes, and thorough examination subsequently showed that she was free of cancer.

Regarding a recent newspaper article, **O. D. Pinkerton** was quick to point out that the *Advertiser* headline, "Three Patients Die from MD's Error" was in error, and that these patients were not under the care of doctors of medicine. He reiterated, "To repeat: MD's had no part in that affair."

Conference Humor

A resident droned on for a full 30 minutes in a profound dissertation on leiomyomas and leiomyosarcomas. He quoted statistic after dreary statistic from every available journal. Finally running out of gas, he paused to ask for comments. There was stunned silence in the soporific postluncheon conference. **Yutaka Yoshida,** known for his terse comments, spoke up, "I guess the report was so complete there are no comments."

Spake **Phil Jones,** resident, during a Queen's conference with moustachio quivering: "Having had a GI series myself, I suggest the possibility that those acromegalic hands of the radiologist could have ruptured the perinephric abscess in this case."

Travellers & Social News

The **Kyuro Okazakis, Harold Kimatas, Howard Hondas, Isami Umakis, Al Ishiis** and **Bill Itos** attended the recent International ENT Conference in Tokyo. We heartily approve of internists, surgeons and OB men attending an ENT Conference.

Another group, including the **Jim Mertzes, Toshihiko Kawasugis, Allan Oglesbys, Cal Sias, Alexander Haffs, John Kometanis, Clifford Kobayashis, Harold Sextons, Francis Chus** and **Gunzo Yamashitas,** signed in at the International Pediatrics Conference in the same city, and part of the group later journeyed to Hongkong and Manila under tour leader Cal Sia.

Over 1,000 patrons crowded the St. Francis Hospital's Woman's Auxiliary Chinese dinner and auction at the Hilton Hawaiian Village Dome in October. **Sister Maureen,** hospital administrator, "wore a thick white carnation lei over her black habit and a positively beatific smile." (We couldn't resist such expressive journalism.) **K. S. Tom** paid $125 for a small oil painting of a harbor painted by Pegi Scully (the Niall Scullys' artistic component) and **Ray Yap** bid for the first item to go on the block, a Schaeffer pen. The Auxiliary netted over $10,000 even though the 1965 Corvair was removed from sale when the highest bid offered was a trifling $2,000.

Community Notes

Children's Hospital with its aggressive programming and dedication to community service has enlarged its allergy clinic with **Joseph Oren** directing. The clinic will provide complete evaluation of indigent patients and a study of causative factors.

Windsor Cutting and his colleagues are helping launch a new hospital on Okinawa and are beginning work on a medical school there. Windsor and **Richard Lee** were in Okinawa in June to look over prospects for such a program. He also felt that the two-year medical school at the University of Hawaii should be ready to accommodate students in 1969, but indicated that the University was not planning to utilize the Mid-Pacific Institute, explaining, "Everybody wants to sell Mid-Pacific except Mid-Pacific!"

We are again indebted to Bob Paulos and his press papers for coming to our defense, the latest being his editorial of September 15 entitled "Groundless Accusations," which we feel should be reprinted in full:

The wildest kind of charges have been made against the medical profession. This, in large part, resulted from the professions' general opposition to the medicare bill—an opposition based on the conviction that medicare will bring with it political meddling in medical practice, to the detriment of standards, and may open the door to socialized or government-dominated medicine on a broad scale.

That, of course, is a matter of opinion, and both the proponents and opponents of medicare had a perfect right to seek support for their positions. But no one has a right to make charges which cannot be substantiated and which are without foundation in fact.

An editorial in a publication of the American Medical Association tells of what a speaker on a national TV program had to say about that organization. Among other things, it was accused of having opposed voluntary health insurance, the social security law, compulsory smallpox vaccination, school health services, Red Cross blood banks, and so on. The publication points out that none of these allegations are true—and that they were refuted, with complete documentation, when first made some years ago.

As for the charge that the medical profession is indifferent to the problems of the aged, it is a matter of record that the AMA offered an alternative to medicare, called Eldercare, which would have provided a broader and better range of services, paid for with public funds, for those in financial need.

The AMA publication adds: There is no constructive purpose to criticism which lacks discernment, objectivity and documentation.

That covers the case perfectly.

We note in a local press release that 70 per cent of Hawaii's physicians and surgeons had earnings in excess of $10,000 in 1964 (per a U.S. Labor Dept. report). Median annual earnings also were more than $10,000. The U.S. median for physicians and surgeons was $14,561. We don't know whether we are on par with or below the U.S. median. At any rate we compare favorably with the dentists, only 52 per cent of whom earned more than $10,000 in 1964, but the lawyers (with their medico-legal suits) are catching up, for 67 per cent of Hawaii's lawyers and judges had incomes over $10,000. Food for thought.

Health Department

Ralph Berry, State epidemiologist, and **Peter Kim,** Kauai district health officer, are recommending flu immunizations for high risk categories in view of the U.S. Public Health Service's prediction that this will be a big influenza year.

F. H. Tong, Maui district health officer, having "eradicated" the rat problem on Maui, is now embarking on a mosquito eradication program. The target is the Aedes aegypti, a well-known carrier of yellow fever and dengue and known to Mauians as the "day-biting mosquito."

Bearer of dire tidings, **Ralph Berry** reports that Hawaii has the highest Salmonella infection rate in the nation. Hawaii's last comparative rate, it seems, was 74/100,000 population and that the second highest incidence rate in the U.S. is less than half of that. Highly suspect in Hawaii are raw or incompletely cooked animal intestines that are eaten by some ethnic groups. In October, Ralph had refuted **Henry Kempe's** opinions regarding the dangers of smallpox vaccination and pointed out that in 1963, 75,000 cases of smallpox were reported in Asian countries, and that one in four unvaccinated cases die. In November, he urged measles vaccination for children and cautioned mothers about boric acid. Two Hono-

continued page 278



For courtesy demonstrator at your home or office, call 506-211

On display at **SCHUMAN'S**
1234 South Beretania St.

lulu babies were poisoned recently by swallowing small amounts of boric acid in a commercially available diaper powder.

Ira Hirschy, communicable disease executive officer and head of Hansen's Disease Branch, saluted the Kalaupapa settlement's centennial. He reported 19 Hansen's disease cases for the past year but predicts that with present trends, there will be only occasional cases among native-born Hawaiians after 1980. The danger, however, is now chiefly from people who have migrated to the Islands in recent times, especially from Samoa and the Philippines.

Entrepreneurs

Quiet and efficient **Marquis Stevens** is the newly appointed Medical Director for Hawaiian Life Insurance Company. Enterprising **Raymond Yap,** President of Kahaluu Pond (a corporation), is considering a 40-acre development of resort hotels and apartment units with a shopping center and marina for the Kahaluu fish pond area. **Edwin Kam** sold 4.5 acres of Kailua Bay property to the Keeaumoku Management Corporation, which plans a subdivision. **Ralph Cloward,** neurosurgeon, political commentator, and businessman, is Vice President of the new radio station, KCCN, which has received FCC approval and plans programming. **Sam Allison,** his HMA prexy duties fulfilled, was one of 37 local business executives who completed the special business management course, Foreign Import-Export, offered by the University of Hawaii's Small Business Management Program.

The **Richard Changs** were awarded a $866,400 verdict for their downtown property at Hotel and Punchbowl Streets which they had purchased for $420,000 at auction five years ago. Senator **James Fleming** and son flew a new twin-engine Beech Baron for their Valley Isle Aviation from San Francisco in 12 hours 20 minutes. This was the physician-senator's third such trip.

Hors de Combat

Someone had a nasty cold, it seems. **Yokichi Uyehara** had $200 worth of sleeping, cold, and asthma pills stolen from his office at 846 No. King St. in October. **Richard Chun** and **Edward Lum** had their offices at 1163 So. Beretania robbed of barbiturates and $58.60 in cash in November. Richard lost $57 and Edward $1.60 in change.

Missing sailor **Charles Belcher,** Big Island state psychiatrist, summed up his "lost weekend" of four days with three words: "kind of embarrassing." He and his 13-year-old son left Kahului, Maui, in a 25-foot trimaran and became the object of a Coast Guard land, sea, and air search while they were enjoying a leisurely cruise.

Lester Kashiwa climbed uninjured from his totally wrecked car after crashing into a highway sign and concrete bridge abutment around 2:45 A.M. and gallantly credited a fastened seat safety belt for saving him from injury.

R. Reginald Patterson, and 24 members of Leeward Oahu Hospital's staff of 40, signed a petition demanding the resignation of the assistant administrator because she uses vulgar language excessively, creates a bad public image, and is not fit to carry out her duties. **P. Howard Liljestrand,** hospital administrator, rejected the allegations, though admitting that she was undiplomatic at times and unfairly harsh at times. R. Reginald said, "If she doesn't like something, there is only one way to do it—her way. If you disagree, she rants and raves and swears." Interesting behaviorism.

Ralph Cloward, Honolulu neurosurgeon, was cleared in a $202,500 malpractice suit brought by the wife of an attorney who claimed that Ralph said he would cure her frozen shoulder in 30 days. The moral is, don't treat a lawyer's wife.

News

SOCIAL SECURITY DISABILITY EVIDENCE OBTAINED THROUGH NARRATIVE REPORTS

When you furnish the social security disability program with evidence on a patient's condition, you are being asked to report by means of a standard medical narrative rather than a questionnaire-type form. If the report lacks sufficient information for a disability determination, the physician reviewing the claim may require additional data that you may have in the patient's chart.

These developments were announced by Dr. Morton E. Berk, Administrative Medical Consultant of the Division of Vocational Rehabilitation, the State agency that makes determinations for the social security program locally.

"Generally," said Dr. Berk, "the treating physician can provide all the medical evidence needed for determining whether the patient is disabled."

Physicians' preferences led to replacing the old-style questionnaire with the new narrative report. Studies in six states demonstrated that doctors could give a clearer, more complete clinical picture of a claimant by using a reporting format, which comes as second nature to most physicians. As a result, the disability program is introducing nationwide a revised form designed to provide ample space and a more effective format for detailing the patient's history, physical and laboratory findings.

"This format and space will help you transcribe those parts of the patient's chart pertinent to his impairment," said Dr. Berk. "When you report the data that the reviewing physician needs to evaluate remaining capacity for work, you're helping your patient receive prompt, sound handling of his claim."




TROUBLED BY BLEMISHES?

Don't let unsightly veins keep you from the beach. Use COVERMARK. . . . It's completely waterproof, covers without an artificial look to conceal burns, birthmarks, surface scars, dark circles, and brown spots.

Lydia O'Leary
OF HAWAII
1010 ALAKEA ST., ROOM 202
PHONE 574-704

WILLIAMS MORTUARY

"CHAPEL OF THE CHIMES"

1076 S. Beretania St., Phone 52-587 **Ample Parking Adjoining Mortuary**

OVER A CENTURY OF SERVICE

"Service measured not by gold but by the Golden Rule"

MEMBER

National Selected Morticians, National Funeral Directors Association,
Order of the Golden Rule, Hawaii Funeral Directors Association

HAWAII CALENDAR*

HMA ANNUAL MEETING, May 11-15, 1966, Princess Kaiulani Hotel. **AMA ANNUAL CONVENTION,** June 26-30, 1966, Chicago. **PAN PACIFIC SURGICAL** Association 10th Congress, Part I, September 20-28, Princess Kaiulani. Parts II and III to follow in Japan, Hong Kong, The Philippines, Thailand, India, Singapore, Australia, and New Zealand.

FEBRUARY

February 1—**Visiting Professor** Fred J. Ansfield from the Dept. of Clinical Oncology, University of Wisconsin Medical School. Honolulu.

February 1-28—**Visiting Professor** Robert McKay, Second month.

February 7-11—**Seminar** on Salmonellosis and Liptospinosis: R. N. Collins, M.D.; Albert Martin, M.D.; Mildred N. Galton, M.D., Chief of Vet. Med.; Kenneth D. Quist, DVM; U.S.P.H.S. Com. Dis. Center and Department of Health. February 7 (Ala Moana Banquet Hall), February 8 (Hawaii), February 10 (Maui), February 11 (Kauai).

February 23—**Annual Meeting,** Hawaii Chapter, American College of Physicians, Mabel Smyth Auditorium.

MARCH

March 1-31—Carl P. Huber, M.D., Professor and Chairman, Dept. of Ob-Gyn, Indiana University Medical Center.

March 4-14—**Visiting Professor** Macdonald Critchley, Neurologist, from the Dept. of Medicine, National Hospital, London. Honolulu.

March 7-23—**Visiting Professor** Ralph Jacox from the University of Rochester, Department of Medicine. St. Francis Hospital.

March 24-27—HMA Council Meeting and Scientific Session. Coco Palms, Kauai.

APRIL

April 4-15—**Visiting Professor** Howard Lewis, M.D., Professor of Medicine, University of Oregon. The Queen's Hospital.

April 17-20—**(Postconvention)** American Orthopsychiatric Association. Kahala Hilton Hotel. Contact: Dr. Marion F. Langer, Executive Secretary, New York City.

MAY

May 11-15—**HMA Annual Meeting.** Princess Kaiulani Hotel.

May 16-31—**Visiting Professor** Philip A. Tumulty, M.D., Professor of Medicine, Johns Hopkins. St. Francis Hospital.

JUNE

June 19-25—**Convention,** 7th Annual Western Conference of Foundation for Medical Care. Ilikai Hotel.

JULY

July-August—**Visiting Professor** Robert Cooke, M.D., in Pediatrics, Johns Hopkins. Children's Hospital.

July 11-26—**Visiting Professor** Thomas Brenn, M.D., Professor of Medicine, University of Southern California. St. Francis Hospital.

July 17—**Symposium,** sponsored by Lederle and the Honolulu County Medical Society. ■

* Errors in listings are not the responsibility of the HAWAII MEDICAL JOURNAL.

OCEANSIDE GOLF

on beautiful Kauai

Enjoy uncrowded golfing any day of the week, any week of the year at championship Wailua Golf Course . . . just across the street from your delightful Polynesian accommodations at

Coco Palms Resort



Rates from $17 per day, double
Special group package rates also available

Island Holidays Resorts



Call 931-111 for information and reservations

ATTENTION

Available to Doctors at Wholesale
Widest Selection of Professional
Microscopes in the Pacific

HAWAII'S LARGEST OPTICAL
IMPORTER-DISTRIBUTOR

MOORE
INTERNATIONAL

1216 KAUMUALII
PHONE 813-691



DEPROL®

meprobamate 400 mg. +
benactyzine hydrochloride 1 mg.

Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

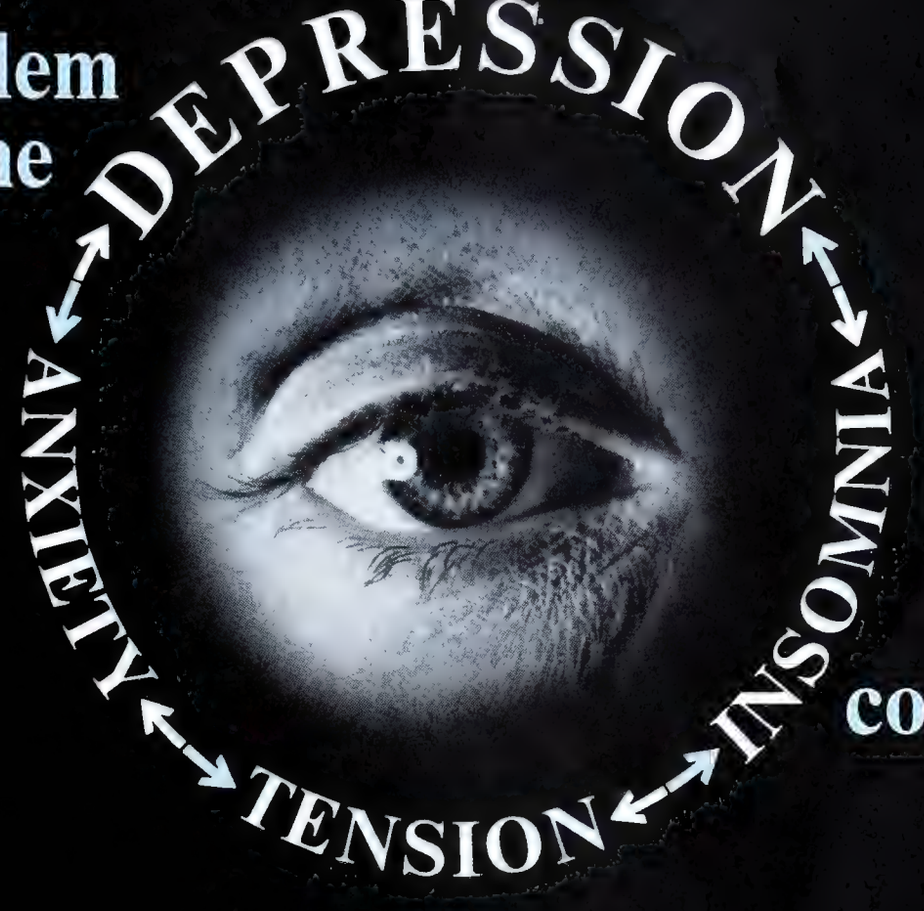
Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

Supplied: Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.
Before prescribing, consult package circular.

WALLACE LABORATORIES / *Cranbury, N. J.*
CD-5726

When
nsomnia
s a problem
in the



complex

TRY DEPROL®–

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

A LOGICAL FIRST CHOICE

**usually restores
normal sleep quickly
by helping
to lift depression…
calm associated anxiety,
tension, and rumination**

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-5726

Our "Angels"

Abbott Laboratories 207, 208, 209, 210
American Cancer Society 274
American Factors, Ltd. 205
Ames Company, Inc. 283
Ayerst Laboratories 284
Bishop Trust Company 203
Bristol Laboratories 214, 215, 270, 271
Burroughs-Wellcome & Co., (U.S.A.), Inc. 220, 269
Carnation Company 263
Ciba Pharmaceutical Co. 218
Coca-Cola Bottling Co., of Honolulu 280
Cutest Uniforms 272
Eastman Kodak Company 219
Financial Management Institute 282
Geigy Pharmaceuticals 267
General Diagnostics 256
Hair Clinic 272
Hawaii Medical Service Association 273
Health-Mor, Inc. 257, 258, 259
Island Holidays 279
Kailua Professional Center 275
Kahanaola 211
Lederle Laboratories, Inc. 265
Lilly, Eli, & Co. 201, 222
Medical Placement Bureau 268
Moore International, Inc. 280
O'Leary, Lydia, of Hawaii 278
Optical Dispensers of Hawaii, Inc. 268
Parke, Davis & Co. 202
Pitman-Moore Company 212, 213
Professional Services 217
Roche Laboratories 221
Schuman Carriage Co., Ltd. 277
Searle, G. D., & Co. 242, 243
Star-Bulletin Printing Co. 266
Summers Shops Insert
Wallace Laboratories 280, 281
Williams Mortuary 279

Financial Management Institute

Management Methods For Professional People

1481 S. King Street **Honolulu, Hawaii 96814**

Professional Center Bldg.

Rx FOR PROFESSIONAL PERSONS WITH MANAGEMENT PROBLEMS

PROVEN MANAGEMENT METHODS WHICH CAN HELP YOU!

1. Efficient management methods: = Cost savings, more productive time, increase in personal income.

 One of the methods we have available is an account receivable billing system, which is custom fitted to your practice, to produce efficiency and economy of operation.

2. Lifetime financial planning by objective and unbiased computer programming: = A plan for: Estate condition, personal net worth. Distribution of income and expense.

 By being able to project these areas 10, 20, 30 years or more into the future, we can help you anticipate when financial problem areas will arise, such as income and estate taxes, and *plan for them now!*

Interviews arranged at the Doctor's Convenience. Phone 994-989

March-April, 1966

HAWAII MEDICAL JOURNAL



RESEARCH EDUCATION SERVICE
AMERICAN CANCER SOCIETY

HMA's 110th Annual Meeting May 11-15

In this issue

Streptococcus Surveys

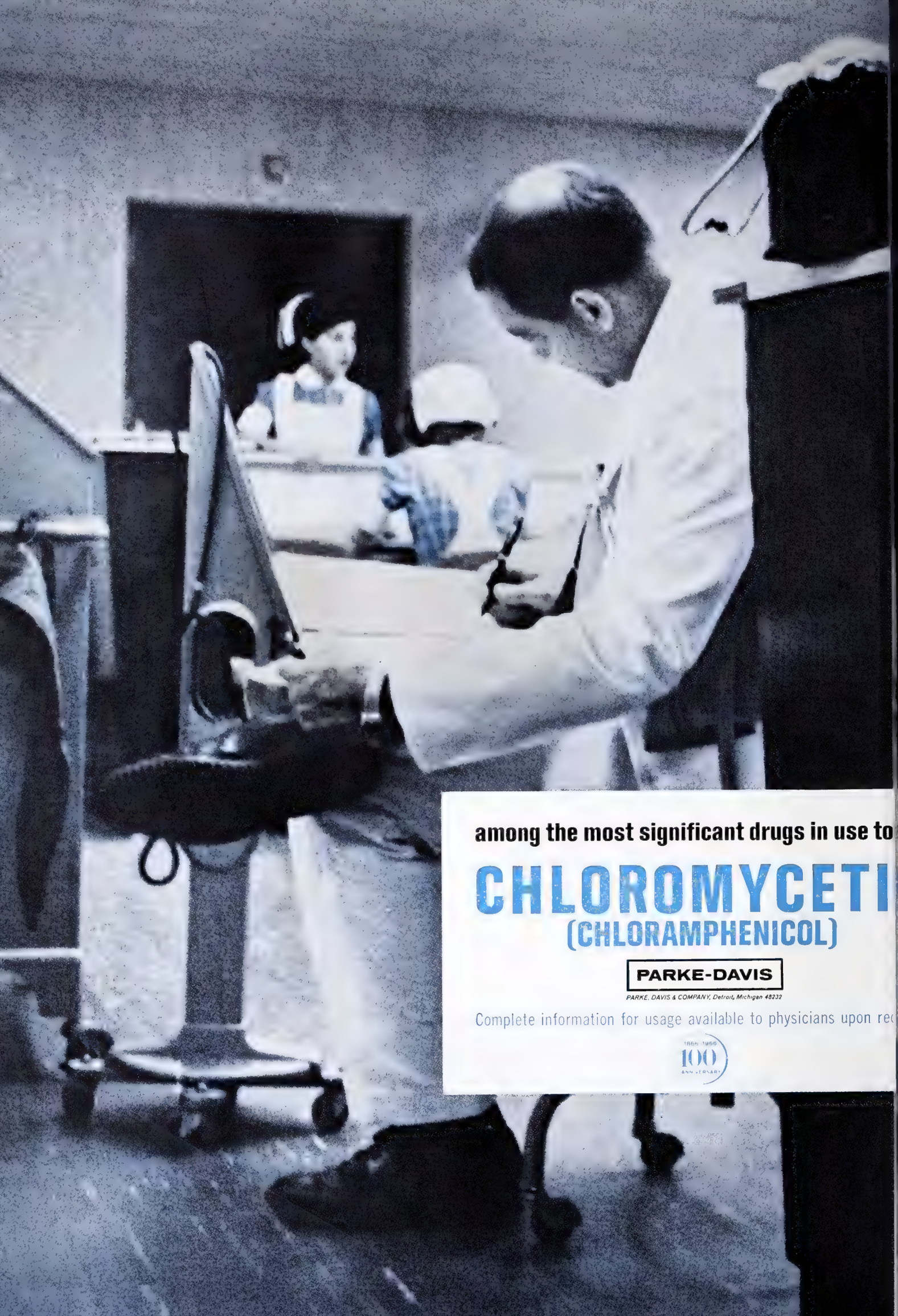
HMSA and the Court of Public Opinion

Table of Contents, page 290

Hawaii Calendar, page 354

Reports & Snorts, page 298

VOLUME 25 • NUMBER 4



among the most significant drugs in use to

CHLOROMYCETI

(CHLORAMPHENICOL)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage available to physicians upon re

1866 1966
100
ANNIVERSARY

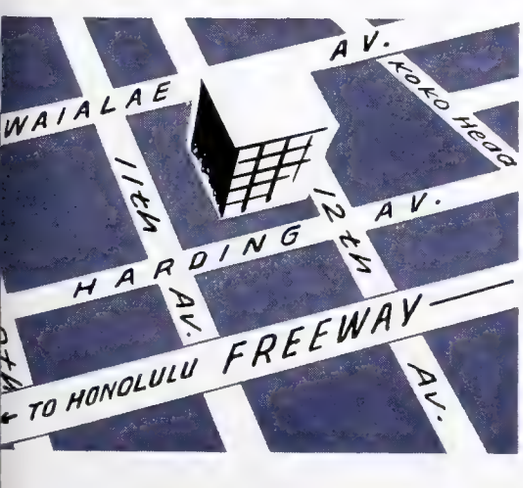
KAIMUKI'S FIRST MEDICAL AND PROFESSIONAL CONDOMINIUM



THE KAIMUKI CENTER

℞ A Prescription for All Doctors

LOW COST: You buy a suite for as little as $40.00 a square foot. Monthly loan and expense payments start at 26¢ a square foot • EQUITY GROWTH: with loan payments • APPRECIATION: Kaimuki is a leading area in property appreciation • RESALE: Excellent for capital gain, on retirement, or on sale of your practice, or to add to your estate • RENTAL: A source of continuing income • CAPITAL: Refinancing can produce principal funds for further investment • SECURITY: What you are presently paying as rent will buy security for your family • MAXIMUM FINANCING: 20 year mortgage loans for 70% of purchase price are available, as are second mortgages up to 20%.



60 year lease, with 25 year fixed rental.
Tenant Parking—one for one included in purchase price.
Customer Parking — 250 adjacent Municipal parking stalls. 110 additional Municipal parking stalls within one block.
Bus Service only ½ block away.

Carpets or Floor Tile.
Drapes.
Finished Floors.
Suspended Ceilings.
Central Air-Conditioning.
High Speed Elevator Service.
Freeway Entrance—1 block. Freeway Exit—2 blocks.

Location: 1120 Twelfth Avenue, Kaimuki — 2 short blocks from the new freeway exit and an estimated 10 minutes from Waikiki, Ala Moana and downtown Honolulu.

For Sales Information Contact:

BUSINESS INVESTMENT, LTD.

SUITE 1416, ALA MOANA BUILDING, HONOLULU • PHONE 90-948

a LANKA KAI development

HAWAII MEDICAL JOURNAL

Published Bi-Monthly by the HAWAII MEDICAL ASSOCIATION (Incorporated in 1856 under the Monarchy), 510 S. Beretania St., Honolulu, Hawaii 96813 • *Editor,* HARRY L. ARNOLD, JR., M.D. • *News Editor,* HENRY N. YOKOYAMA, M.D. • *Managing Editor,* LEE MCCASLIN

VOLUME 25, NUMBER 4 • MARCH-APRIL, 1966 • $6.00 A YEAR, $1.00 A COPY

The JOURNAL may not be held responsible for opinions expressed in papers, discussions, communications, or advertisements. The advertising policy of the HAWAII MEDICAL JOURNAL is governed by the rules of the Council on Drugs of the American Medical Association. The right is reserved to reject material submitted for editorial or advertising columns. All material for publication must be in the hands of the editor on or before the 10th day of the month preceding publication date. Reprints of original articles will be supplied at actual cost, provided request is attached to manuscript or made in sufficient time before publication. A reasonable number of cuts and illustrations accompanying an article will be accepted for printing. The right is reserved to ask the author to bear cost of these when it is found necessary to do so.

Copyright, 1966, by the Hawaii Medical Association, Honolulu, Hawaii. Entered as second class matter, October 17, 1941, at the Post Office in Honolulu, Hawaii, under the Act of August 24, 1912. Office of Publication: Mabel L. Smyth Memorial Building, 510 S. Beretania St., Honolulu, Hawaii 96813.

The Hawaii Medical Association

Officers 1965-1966

President • O. D. PINKERTON, *Honolulu*
President-Elect • THEODORE T. TOMITA, *Honolulu*
Past President • SAMUEL D. ALLISON, *Honolulu*
Secretary • RANDAL A. NISHIJIMA, *Honolulu*
Treasurer • HERBERT Y. H. CHINN, *Honolulu*

County Presidents

Hawaii County • ED B. HELMS, *Hilo*
Honolulu County • JOHN J. LOWREY, *Honolulu*
Kauai County • Y. MIYASHIRO, *Waimea*
Maui County • KENNETH HALING, *Kahului*

Delegate to A.M.A. • RICHARD D. MOORE, *Honolulu*
Alt. Delegate to A.M.A. • GEORGE H. MILLS, *Honolulu*

Councillors 1965-1966

Maui • JOSEPH E. ANDREWS
Honolulu • GROVER H. BATTEN
Honolulu • BERNARD W. D. FONG
Honolulu • ANDREW C. IVY, JR.
Hawaii • ROBERT M. MIYAMOTO
Kauai • SAMUEL R. WALLIS

Officers—County Societies—1966

HAWAII		HONOLULU
ED B. HELMS •	President	• JOHN J. LOWREY
ETTA WRIGHT BEST •	Vice President	• GEORGE H. MILLS
CHARLES H. BELCHER •	Secretary	• KEITH F. O. KUHLMAN
PAUL CALDWELL •	Treasurer	• HERBERT Y. H. CHINN

KAUAI		MAUI
Y. MIYASHIRO •	President	• KENNETH HALING
SAMUEL WALLIS •	Vice President	• BILLIE FERN STROTHER
JOHN DE LA SALLE MORRIS •	{Secretary} {Treasurer}	• SAKAE UEHARA





one mid-morning **one mid-evening**

New 300 mg tablet It's made for b.i.d.

For Adults–2 tablets provide a full 24 hours of therapy...with all the extra benefits of DECLOMYCIN...lower mg intake per day...proven potency... 1-2 days' "extra" activity to protect against relapse or secondary infection.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
300mg FILM COATED TABLETS

Effective in a wide range of everyday infections —respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of discomfort.

Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncracy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg of demethylchlortetracycline HCl.

Tablets: film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

674-6—3838

HAWAII MEDICAL JOURNAL

Contents

Volume 25, Number 4, March-April, 1966

Articles

A Three-year Study of Beta Hemolytic Streptococci in Throat Swabs—1962-1964 309
Ralph H. Tanimoto, M.S., Charles Miyasato, B.A., and George Ching, B.S.

Streptococcal Survey in Hawaii: Study Among Unselected Children with Respiratory Infections 312
L. T. Chun, M.D., and Marjorie Dole, M.S.

Cytology, an Increasingly Valuable Tool in Cancer Detection 318
E. Gordon Dickie, M.D.

A Numerical Index for Outpatient Schizophrenics: Its Relation to Stress Concepts 323
Frederick E. Popoff, M.D.

The First Auto-Anti-Xg^a Antibody in a Female 328
Mitsuo Yokoyama, M.D., David T. Eith, M.D., and Max Bowman, MT(ASCP)

Editorials

HMSA and the Court of Public Opinion 330

The AMA Fights Quackery 331

Features

Book Reviews 334

County Society Reports 337

Hawaii Academy of General Practice 332

Hawaii Calendar 354

In Memoriam—Doctors of Hawaii—LX 333

New Members 336

Notes and News 338

President's Page 329

Reports & Snorts 298

This Is What's New! 335

Hawaii Technologists' Bulletin

President's Message 344

Continuing Education in the Brew 344

1966 HSMT Convention 345

Kauai Society Thanks HSMT 345

Correspondence

REALISM AND DEAR JOE

TO THE EDITOR:

I have read the interesting "Dear Joe" letter written by our friend, Fred Reppun, and agree that he has an excellent grasp of our current situation with HMSA. These problems and many more are plaguing our society and will continue so indefinitely, especially now with medicare and eventual total care currently on the horizon. With the doctor's reactionary probabilities to the above as are commonly reported by various foreign areas, it is also conceivable that in due course, we too, will prove to be no exception and will demand due representation and appropriate recompense for services rendered.

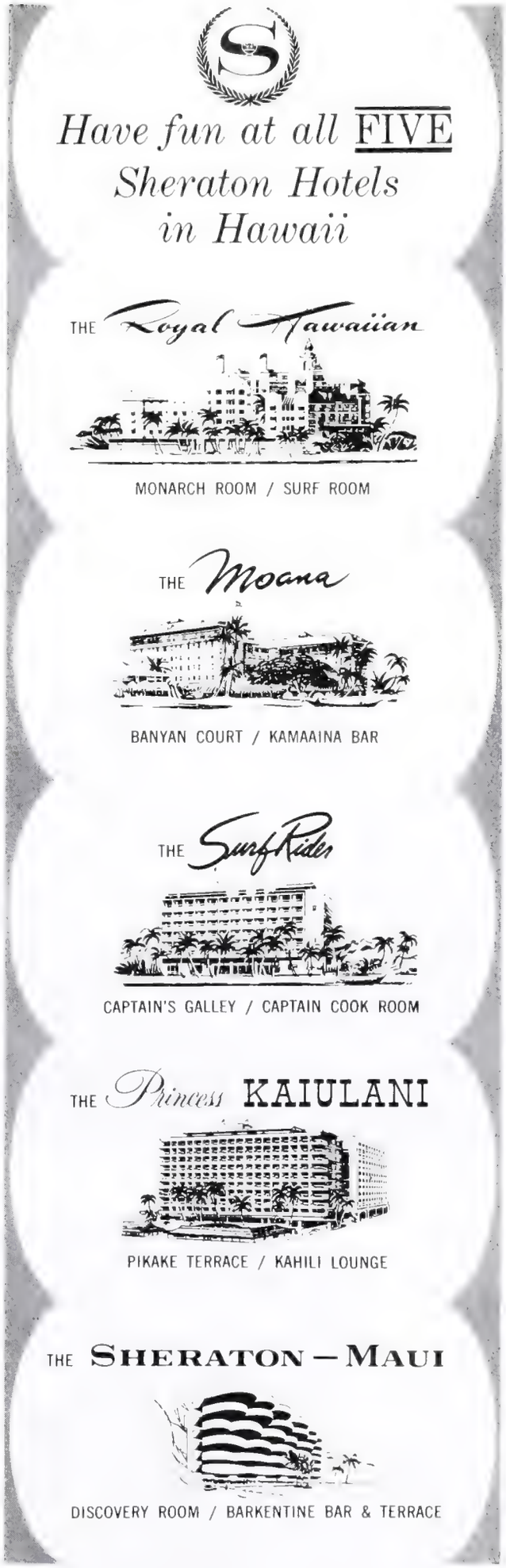
What this and every medical society needs is a man of Joe's calibre but one who will totally serve the society on a full time basis and realistically paid to the hilt to serve our collective purpose in this ever changing world of socio-medical economic pressure which is here to stay. This would require a rare bird indeed, preferably a medical man who is either dedicated or one disenchanted with medicine, but one who could be persuaded to enter a new field of executive directorship of our society and in active charge of the whole she-bang. Such a man must have the qualities of or be potentially groomed for labor management relations; one who could shed the cloak of former professional mannerism and be prepared to wear boxing gloves if necessary, to drive and hammer the thought at any bargaining table, that, we too, are subject to socio-economic pressures and must feed, clothe and educate our families and are entitled to reasonable rewards for our labor. We must recognize now and forevermore that we cannot send a boy out on a man's errand, not even a bus load.

The multitude of individual pressure groups that deal with medicine representing government, labor and industry are far too tough and business minded to handle with kid gloves and timidity. That, inherently a doctor substituting for the real McCoy on a limited part time basis is a sitting duck and is not the man to arbitrate complex multi-lateral problems no matter how or by whom the medical dollar is dispersed.

Somewhere, somehow, a man must be found who could be stripped of his stethoscope and told: Look, you are no longer a doctor, you are a new found medical executive of a sort, a highly specialized mutant, a man with bushy eyebrows, a stone jaw with a glib tongue and from now on must step into the areas of professional maulers that have henpecked us to the bone and fight for the doctor's cause. Even if there be no takers, it is not inconceivable that someday we may deem it practical to reach into the ranks of existing organized labor professionals, tapping someone on the shoulder with a lot of know how and say: Look Bud, I believe the stevedores are well under control, how about coming over to our side of the fence, it's a bloody mess, besides we too, could use a lot of fringe benefits.

P.S. Any Professional man with a chest full of metals may apply. Any takers? ■

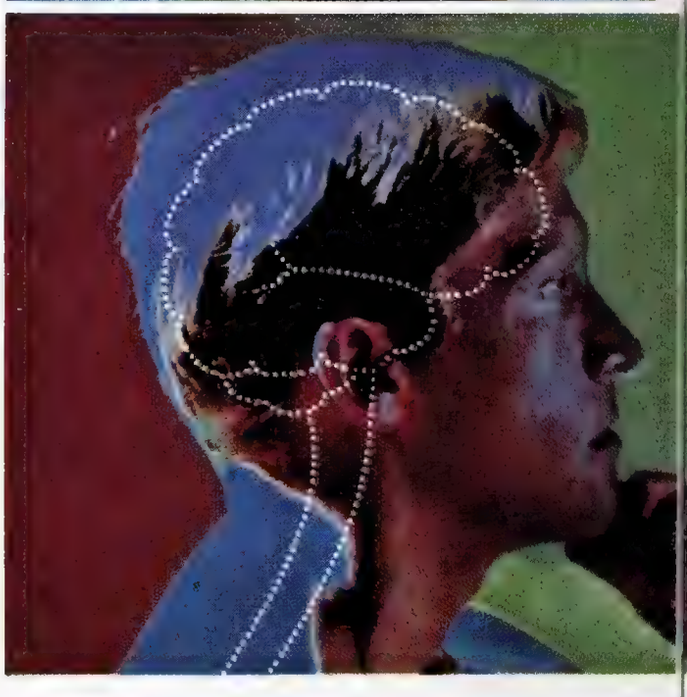
M. H. LICHTER, M.D.



BASIC BACTERICIDAL ANTIBIOTIC THERAPY IN INFECTIONS THROUGHOUT THE BODY







THE PENICILLIN YOU USE LIKE A BROAD-SPECTRUM ANTIBIOTIC

Instead of tetracycline or chloramphenicol—instead of erythromycin or triacetyloleandomycin—you can now treat bacterial infections with the first broad-spectrum penicillin—Polycillin (ampicillin trihydrate). Unlike these other agents, Polycillin (ampicillin trihydrate) is a broad-spectrum antibiotic that is *bactericidal* (not merely bacteriostatic) at low concentrations and exceptionally well tolerated even at high concentrations. Now available in a form to suit any need—for children or adults—it is an ideal first choice whenever broad-spectrum therapy is called for.

Basic in Respiratory Infections

Polycillin (ampicillin trihydrate) is effective against the most common respiratory pathogens—*D. pneumoniae,* streptococci, and sensitive staphylococci; against *H. influenzae* it is unexcelled. In more than 500 respiratory cases, cured or improved responses were noted in 95%.[1] (Note, however, that ampicillin is not indicated in *resistant* staphylococcal infections.)

An Innovation in G.U. Infections

Polycillin (ampicillin trihydrate), with its extended spectrum, is effective where penicillins were rarely effective before—*throughout* the urinary tract. It was "...the most effective drug tested against *E coli* and *P mirabilis.*"[2] In over 800 evaluated G.U. infections, it elicited favorable clinical response in 87.2%.[1]

A New Approach to Meningitis

In the treatment of bacterial meningitis, the clinical success with Polycillin-N (sodium ampicillin) for Injection in 192 patients (compared with 261 patients treated with chloramphenicol and/or penicillin G) was so uniformly excellent against each of the meningeal pathogens (pneumococci, meningococci and *H. influenzae)* and so well tolerated and free of toxicity—that the investigators concluded: "...the advantages of a single drug and the absence of significant toxicity suggest that this agent be considered the drug of choice for the initial treatment of bacterial meningitis...."[3]

Over-all Response: 87.8% Cured or Improved

Of bacterial infections treated during the past four years with Polycillin (ampicillin trihydrate), an over-all cured or improved rate was noted in 87.8% of patients. These included respiratory, G.I. and G.U. cases, septicemias, soft-tissue infections and infections of the central nervous system—in all, over 2,000 cases for which complete data were available.[1]



References: 1. Published reports and data on file at Bristol Laboratories. 2. Anderson, K.N., *et al.:* JAMA *187*:555 (Feb. 22) 1964. 3. Mathies, A.W., Jr., *et al.:* Synopsis of experience with ampicillin in bacterial meningitis. Presented at 4th Internat. Cong. Chemother., Washington, D. C., Oct. 18-21, 1965.

BRISTOL THERAPEUTIC SUMMARY: For complete information, consult Official Package Circular.

Indications: Infections due to susceptible strains of Gram-negative bacteria (including Shigellae, *S. typhosa* and other Salmonellae, *E. coli, H. influenzae, P. mirabilis, N. gonorrhoeae* and *N. meningitidis)* and Gram-positive bacteria (including streptococci, pneumococci and nonpenicillinase-producing staphylococci).

Contraindications: A history of serious allergic reactions to penicillin and infections due to penicillinase-producing organisms.

Precautions: Typical penicillin-allergic reactions may occur, especially in hypersensitive patients. Mycotic or bacterial superinfection may occur. Experience in newborn and premature infants is limited and caution should be used in treatment with frequent organ function evaluations. Safety for use in pregnancy is not established. In gonorrheal therapy, serologic tests for syphilis should be performed initially and monthly for 3 months. Assess renal, hepatic and hematopoietic function intermittently during long-term therapy.

Adverse Reactions: Skin rash, pruritus, urticaria, nausea, vomiting, diarrhea and anaphylactic reactions. Mild transient elevations of SGOT or SGPT have been noted.

Usual Dosage: Adults—250 or 500 mg. *q.* 6 *h.* (according to infection site and offending organisms). Children—50-100 mg./Kg./day in 3 to 4 divided doses (depending on infection site and offending organisms). Children weighing more than 20 Kg. should be given an adult dose. Beta-hemolytic streptococcal infections should be treated for at least 10 days.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York

A dosage form for every patient

Polycillin®
(ampicillin trihydrate)
CAPSULES

Polycillin®
(ampicillin trihydrate)
FOR ORAL SUSPENSION

Polycillin-N™
(sodium ampicillin)
FOR INJECTION – I.M./I.V.



Now, now, Mrs. Forsythe, we've never lost a cold patient yet.

When she's experiencing acute discomfort from cold symptoms, it's small wonder the patient becomes distressed about her condition.

She will breathe easier when you prescribe Novahistine LP.

Novahistine LP is a long-acting decongestant that helps restore normal mucus secretion and ciliary activity—physiologic mechanisms which prevent infection of the respiratory tract. A dose of two tablets taken in the morning and repeated in the evening will usually keep air passages clear for 24 hours.

Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution patients who operate machinery or motor vehicles that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

NOVAHISTINE® LP

For relief of nasal congestion.



Saxon

IF YOU THINK ALL DRUG SUPPLIERS ARE THE SAME . . .

YOU HAVEN'T DONE BUSINESS WITH AMFAC!





Phone 585-531

Service is the cornerstone of our operation. We preach it, practice it, perfect it. And we mix this kind of service with the world's finest drug lines.
SPECIAL DELIVERY SERVICE TO HAWAII'S MEDICAL PROFESSION/ SAME-DAY DELIVERIES/SCHEDULED RURAL DELIVERIES.
Phone 585-531 between 7:30 a.m. and 4:30 p.m. weekdays.

AMERICAN FACTORS LIMITED

DRUG DEPARTMENT



Charles Malang
MANAGER



Johnny Kawafuchi
Sales Manager



Kenny Hills
Salesman—Oahu



Frankie Fernandez
Salesman—Oahu



Hideo Kawabata
Salesman—Oahu



Bill Lindsey
Salesman—Oahu



Masaaki Sasaki
General Sales
—Hawaii



Yoriyoshi Hara
Salesman—Hawaii



Christine Oga
Inside Sales
—Oahu



Edna Sato
Inside Sales
—Oahu



Doris Uyeda
Inside Sales
—Oahu



Elizabeth Azevedo
Inside Sales
—Oahu



George Pereira
Buyer



Eileen Brenessel
Secretary



Charlie Freitas
Warehouseman



Donald Hangai
Warehouseman



Hans Yoshino
Warehouseman



Shiro Sodetani
Warehouseman

Arbrook
Ames Co., Inc.
Alcon Laboratories
Allergan Pharmaceutical
Astra Pharm. Products, Inc.
Ayerst Laboratories, Inc.
Bard-Parker
Barnes-Hind Laboratories
Becton-Dickinson & Company
Beutlich, Inc.
Bristol Laboratories
Brockway Glass Company
Burroughs Wellcome & Co.
Ciba Pharmaceutical Prod., Inc.
Dalton, Edward
Davis & Geck Sutures
Drug Package Inc.
Eastman Kodak
Eaton Laboratories
Endo Laboratories
Ethicon Inc.
Fellows-Testagar
Hynson, Westcott, Dunning
Invenex Pharmaceuticals
Johnson & Johnson
Kirkman Pharmacal Company
Lederle Laboratories
Mallinckrodt
McNeil Laboratories
Mead-Johnson & Company
Merrell, William S.
Milex Products
Minnesota Mining & Mfg.
Obergfel
Organon, Inc.
Ortho Pharmaceutical Corp.
Pacific Paper Products
Pfizer Laboratories
Pitman-Moore
Ray-O-Vac Company
Riker Laboratories, Inc.
A. H. Robins Co., Inc.
Roche Laboratories
J. B. Roerig & Company
Sauter Laboratories
Schering Corp.
The Scholl Mfg. Co., Inc.
Searle & Co., G. D.
Smith, Kline & French Lab.
Stanlabs, Inc.
Strong Cobb Arner
Tampax Inc.
Tidi Products
Travenol—Hilo
Vestal Laboratories, Inc.
Wallace Laboratories
Warner-Chilcott Lab.
Warren-Teed Pharmaceuticals
Westwood Pharmaceuticals
Winthrop Products, Inc.

- **APPLICATORS**
- **DESENEX**
- **DRUG ENVELOPES**
- **ETHER**
- **LYSOL**
- **MAZON**
- **OINTMENT TINS**
- **OSYL**
- **Rx BOTTLES**
- **Rx FILES**
- **PILL BOXES**
- **TONGUE BLADES**
- **X-RAY FILMS AND SUPPLIES**



prescribe sound sleep and clear awakening with

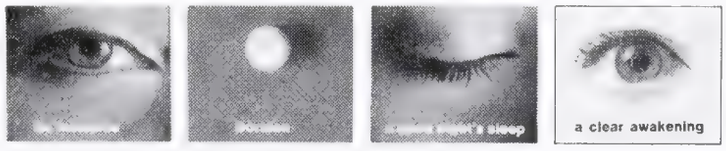
Doriden® (glutethimide CIBA)

Sometimes the pressures of a job can cause insomnia. Often, these same pressures make extra demands for on-the-job alertness. Many of the patients you see every day—a waitress, a secretary, a traffic cop, a corporation executive, a salesman—might face this situation.

Doriden is the logical night-time sedative for these patients. With Doriden, they can expect the good night's sleep they need, awake clear and refreshed. Unlike barbiturates, it rarely causes morning "hang-over"—patients aren't plagued by lingering sedative effects.

Other advantages over the barbiturates: smooth action; little or no pre-excitation; well tolerated—even by the aged, the chronically ill, or patients with liver or kidney disorders.

INDICATIONS AND DOSAGE: *Insomnia*—0.5 Gm at bedtime. *Preoperative Sedation*—0.5 Gm the night before surgery; 0.5 to 1 Gm 1 hour before anesthesia. *Obstetric Sedation*—0.5 Gm at onset of labor. Continuing total daily dosage over 1 Gm is not recommended. CAUTION: Supervise dosage carefully, especially in patients with a known propensity for overdosing. Excessive and prolonged use in susceptible persons (*e.g.*, alcoholics, former addicts, severe psychoneurotics) may result in dependence and withdrawal reactions. In those cases, reduce dosage gradually to lessen the likelihood of withdrawal reactions such as nausea, abdominal discomfort, tremors, or convulsions. Newborns of mothers dependent on glutethimide may exhibit withdrawal symptoms. SIDE EFFECTS: Occasionally, a skin rash may occur; if so, withdraw drug. The rash usually clears spontaneously in 2 or 3 days. Occasionally nausea also occurs. Rarely, acute hypersensitivity reactions and blood dyscrasias have been associated with glutethimide therapy. SUPPLIED: *Tablets,* 0.5 Gm (white, scored) and 0.25 Gm (white, scored); bottles of 100, 500 and 1000. *Tablets,* 0.125 Gm (white); bottles of 100. *Capsules,* 0.5 Gm (blue and white); bottles of 100. *Consult complete literature before prescribing.*



C I B A Summit, N.J. 2/3435MBM

HAWAII MEDICAL JOURNAL

Reports & Snorts

The Blackboard Jungle seems to have existed even in medieval times. At Leipzig in the fifteenth century, the faculty issued the following list of penalties:

1. **Fine of ten new groschen for lifting a stone or other missile with a view to throwing it at a master but not actually throwing.**
2. **For throwing and missing, eight florins.**
3. **For wounding without mutilating, eighteen florins and compensation to master.**
4. **For actual mutilation, expulsion.**

• • •

Sometimes the sharpest thrusts of truth seem to be among the most ancient. From the Sanskrit, try this for size:

A fire with water we defeat
With parasols, the midday heat;
Mad elephants, with goads that prick;
Oxen and asses, with a stick.
Science has cures for every ill
Except the fool: he prospers still.

• • •

If pathogenesis intrigues you, reflect upon the discovery that the chief manifestation of a disease which may be quite largely psychogenic—the thyrotoxicosis of Graves' disease—has been found to depend upon a substance, Long-Acting Thyroid Stimulator (LATS), which is now known to be a gamma globulin: a protein antibody! The name or nature of the antigen, if any, is still unknown.

• • •

Cephaloridine, an improved version of cephalothin, may soon replace penicillin as the drug of choice for treatment of gonorrhea; a single intramuscular injection seems to cure between 88 and 98 per cent of victims. See article in the *JAMA* for March 14.

• • •

B. Sharma suggests in *Lancet* (1:1171, 1965) that brucellosis may be treatable with nalidixic acid (NegGram, Winthrop).

The NIH has granted Marvin Stein of Cornell $106,542 for the first year and additional funds for six more years for a study of psychosomatic causes of asthma. Multiple approaches will be used by the study team.

• • •

Hospitals says the average daily cost of nonfederal short-term general and special hospital beds rose another 6.9 per cent in 1964, to $41.58. Payroll expense accounts for most of the rise. In the Pacific region the average cost reached $54.28; in the south and central states it stayed close to $35. The number of employees per patient has risen from 0.73, in 1946, to 1.33 today.

• • •

Hard of hearing? Bequeath your temporal bones to a regional center of the Deafness Research Foundation. It won't help your hearing any, but it might help someone else's, some day. Dr. Victor Goodhill at the U.C. Medical Center in San Francisco will send you the forms to fill out.

• • •

Chlorphentermine hydrochloride (Pre-Sate, Warner-Chilcott) enabled a group of overweight diabetics to lose weight after months of dietary instruction has failed to help them. The first eight weeks produced most of the benefit.

• • •

J. Sklar Co. announces new infant-size cardiovascular clamps, all with the Kapp-Beck serrations.

• • •

Hoff, DeGraff & Co. at the Bronx VA Hospital find piminodine (Alvodine, Winthrop) as good as morphine in relieving coronary pain (*Am. J. Med. Sci.* 249:495, 1965).

• • •

A sterilizable, disposable foam surgical face mask costing 6½ cents each in lots of 100, or less than four cents in lots of 5000, is announced by Howe Sound Company at 22028 S. 6th Ave., Mount Vernon, N.Y. 10550.



The Pain Is Gone

Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

THREE TIMES A YEAR

Your patients without a plan to economically protect them when they are in need of medical assistance may join Hawaii's own community service medical plan on an individual basis three times a year.

Membership is open to qualified individuals of all ages in

MARCH — JULY — *and* — NOVEMBER

HMSA is a non-profit, community service organization. As such it is able to provide tremendous benefits for reasonably low dues.

HMSA is the medical plan which gives you free choice of doctors and hospitals — an extremely desirable feature.

Member of Western Conference of Prepaid Medical Service Plans



® BLUE SHIELD PLAN FOR HAWAII

HAWAII MEDICAL SERVICE ASSOCIATION

For 25 Years – Hawaii's Own / Hawaii Owned



Tareyton...with the taste worth fighting for

America's largest-selling charcoal-tip cigarette

©The American Tobacco Company



Butazolidin® alka

phenylbutazone	100 mg.
dried aluminum hydroxide gel	100 mg.
magnesium trisilicate	150 mg.
homatropine methylbromide	1.25 mg.

Usually works within 3 to 4 days in osteoarthritis

The trial period need not exceed 1 week. In contrast, the recommended trial period for indomethacin is *at least 1 month.*

That's why it's logical to start therapy with Butazolidin alka—you'll know quickly whether or not it works. And usually, it will.

A large number of investigators have reported major improvement in about 75% of cases. Some patients have gone into remission. Relief of stiffness and pain may be followed quickly by improved function and resolution of other signs of inflammation. And Butazolidin alka is well tolerated, especially since it contains antacids and an antispasmodic to minimize gastric upset.

Contraindications
Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile, or when other potent drugs are given concurrently. Large doses are contraindicated in patients with glaucoma.

Precautions
Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Make regular blood counts. Use greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy.

Adverse Reactions
The most common are nausea, edema and drug rash. Hemodilution may cause moderate fall in red cell count. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Dosage
The initial daily dosage in adults is 300-600 mg. daily in divided doses. In most instances, 400 mg. daily is sufficient. When improvement occurs, dosage should be decreased to the minimum effective level: this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

Also available: Butazolidin®,
brand of phenylbutazone
Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York BU-3804 P

Geigy

Carnation
EVAPORATED MILK



1965
Carnation Healthy Baby Contest
$1,000 1st prize winner,
Laurie Anne Medeiros
of Honolulu, Hawaii

HAWAII'S HEALTHY BABY MILK...

1st CHOICE FOR INFANT FEEDING...
No. 1 in the Islands for generations,
...available everywhere in Hawaii

"from Contented Cows"



Which Is Pyloroplasty with Vagotomy?
Which Is Pro-Banthine?



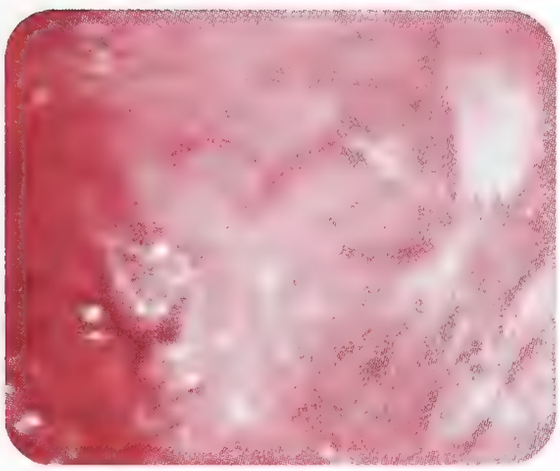
Photographs—Harry Barowsky, M.D., Lawrence Greene, M.D., and Robert Bennett, M.D., from a Scientific Exhibit presented at the Annual Meeting of the American College of Gastroenterology, Bar Harbour, Florida, Oct. 24-27, 1965.

Another example of

Pro-Banthine®

(propantheline bromide)

a true anticholinergic in action



Normal relaxed pyloric antrum; contracted pylorus (pyloric fleurette)

The true anticholinergic values of Pro-Banthine have never been so graphically realized as they are with the recent development of fibergastroscopy and the intragastric camera.

Pro-Banthine consistently produces complete relaxation and immobility of the stomach with a dose of only 6 to 8 mg. intravenously. This is less than half the usual dose orally.

Atropine, on the other hand, required 0.8 mg. intravenously, or twice the normal dose, to achieve a similar effect. This high dose of atropine resulted in expectedly adverse side effects.

Pro-Banthine, in minimal dosage, produces effects similar to pyloroplasty and vagotomy without the disadvantages of permanent post-vagotomy sequelae.

The intragastric photograph A is of a patient who has had pyloroplasty with vagotomy. Photograph B is of a patient given 6 mg. of Pro-Banthine.

Indications: Peptic ulcer, functional hypermotility, irritable colon, pylorospasm and biliary dyskinesia.

Oral Dosage: The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

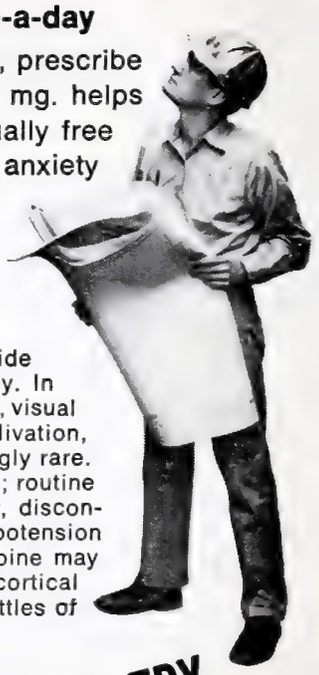
Side Effects and Contraindications: Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. Pro-Banthine is contraindicated in patients with glaucoma, severe cardiac disease and prostatic hypertrophy.

SEARLE

Research in the Service of Medicine

Blueprint for dealing with tension due to stress — Prolixin — once-a-day

For the patient who must be on the job mentally as well as physically, prescribe Prolixin. The prolonged tranquilizing action of as little as one or two mg. helps him cope with tension all day long. Markedly low in toxicity and virtually free from usual sedative effects, Prolixin is effective in controlling both anxiety associated with somatic disorders and anxiety due to environmental or emotional stress. Patient acceptance is good — because Prolixin is low in cost, low in dosage and low in sedative activity. Prescribe Prolixin.



Side Effects, Precautions, Contraindications: As used for anxiety and tension, side effects are unlikely. Reversible extrapyramidal reactions may develop occasionally. In higher doses for psychotic disorders, patients may experience excessive drowsiness, visual blurring, dizziness, insomnia (rare), allergic skin reactions, nausea, anorexia, salivation, edema, perspiration, dry mouth, polyuria, hypotension. Jaundice has been exceedingly rare. Photosensitivity has not been reported. Blood dyscrasias occur with phenothiazines; routine blood counts are recommended. If symptoms of upper respiratory infection occur, discontinue the drug and institute appropriate treatment. Do not use epinephrine for hypotension which may appear in patients on large doses undergoing surgery. Effects of atropine may be potentiated. Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use cautiously in convulsive disorders. **Available:** 1 mg. tablets. Bottles of 50 and 500. For full information, see Product Brief.

WHEN TRANQUILIZATION WITHOUT SEDATION IS DESIRABLE, TRY

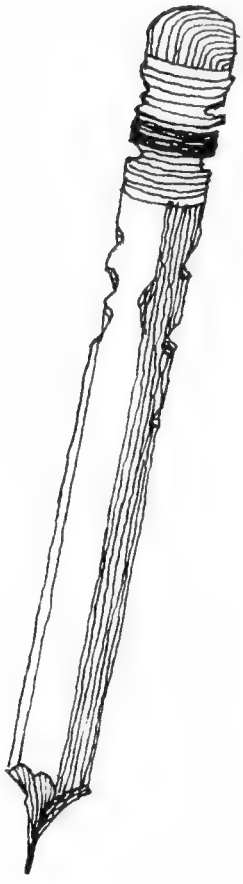
PROLIXIN®

THE SQUIBB TRANQUILIZER

SQUIBB FLUPHENAZINE HYDROCHLORIDE

SQUIBB Squibb Quality — the Priceless Ingredient

If taxes will take too much of your estate...



set your own tax rate.

■ Here, at least, is one tax over which you can exert some control. All it takes is proper planning—well in advance. That's where we come in. Trusts, gifts and other procedures can carry out your wishes, often with substantial savings in taxes. We'd be happy to help, and put our sixty years of such service at your service.

BISHOP TRUST COMPANY

Trust Services Exclusively

BISHOP AND KING STREETS · PHONE 563-771 ■



For a free copy of our new booklet, "Will the State of Hawaii Draw Your Will?," visit our offices at Bishop & King Streets, write us at P. O. Box 2390, Honolulu, Hawaii 96804, or call 563-771.



Low host resistance?

Consider the "extra" antibacterial activity of Ilosone®

Occasionally, therapeutic failure is due to the patient's inability to mobilize his defenses sufficiently to overcome infection. Typical of this is the debilitated patient, the premature infant, or the diabetic. It is in these patients that the high levels of antimicrobial activity of Ilosone are especially useful. Ilosone has demonstrated antibacterial levels two to four times those of erythromycin base or stearate. Furthermore, it attains them earlier and maintains them longer. Even the presence of food does not appear to affect the activity of Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Dosage: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Ilosone®

Erythromycin Estolate

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana. 501280

Lilly

Total throat swabs peak in March and October in Hawaii. Out of every ten, only two are beta hemolytic and one of these is group A.

A Three-year Study of Beta Hemolytic Streptococci in Throat Swabs--1962-1964

RALPH H. TANIMOTO, M.S., CHARLES MIYASATO, B.A., and GEORGE CHING, B.S., *Honolulu**

• *Out of 28,877 throat swabs submitted to the State Health Department laboratory during 1962, 1963, and 1964, the monthly recovery rate of beta hemolytic streptococci remained quite stable at an average of 18.3 per cent of the swabs submitted; just a little over half of these were group A. No seasonal fluctuation was observed. Identification by the fluorescent antibody method was found to be rapid, economical, accurate, and practical.*

THE beta hemolytic streptococcus identification and grouping service† of the State Department of Health in Honolulu, Hawaii, was initiated on a pilot study basis in May, 1961, first by the application of the precipitin technique, and later, beginning in October, 1961, by the use of the fluorescent antibody (FA) technique.

LABORATORY PROCEDURE ESTABLISHED

By November, 1961, a satisfactory procedure was established in the laboratories of the Department of Health for the routine diagnosis of streptococci in throat swabs, i.e., prescreening of specimens by pour-streak sheep blood agar plates, followed by the immunostaining of beta hemolytic colonies then fished into Todd-Hewitt Broth and incubated two to four hours. Centrifuged sediment was stained with a commercial group A conjugate (Sylvana),‡ to which was incorporated sufficient group C antiserum (Difco)§ to remove or suppress cross reactions with groups C and G streptococci and also Staphylococcus aureus. Suitable culture controls were included in each day's run. The optical equipment used was a Reichert fluorescence microscope unit with Schott BG12-OG1 filter combination and HBO 200 Osram light source. For serologic grouping by the conventional capillary precipitin technique, the commercial streptococcus antisera (Difco) A, B, C, D, F, and G were used.

On February 6, 1962, a circular letter announcing the availability of this new and rapid identification service was mailed to all physicians in the State. The physicians were provided with tubes of Trypticase Soy Agar slant, sterile swabs, and other incidental supplies.

FA METHOD FOUND HIGHLY EFFICIENT

From January, 1962, through October, 1963, a comparative study of culture-precipitin and culture-FA procedures was made on beta hemolytic streptococci fished from 2,797 blood agar plates (Table 1).

Group A streptococci were detected by both the FA and the precipitin techniques in 1,552 specimens, non–group A streptococci in 1,235. The two techniques showed an agreement on 2,787, or 99.6 per cent, of the 2,797 specimens. Of the ten cultures showing discrepancies, nine were Group A by precipitin test but were missed by FA; one was positive by FA but the isolates from the same blood plate were nongroupable by the precipitin test.

TABLE 1.—*The Detection of Group A Streptococci by FA and Precipitin Test in the 2,797 Positive Prescreening Blood Agar Plates.*

	PRECIPITIN TEST		
	Group A	*Not Group A*	Total
Group A by FA	1,552	1	1,553
Not Group A by FA	9	1,235	1,244
TOTAL	1,561	1,236	2,797

FA Sensitivity 99.4%, Specificity 99.9%
Total agreement 99.6%

Of the 1,561 specimens positive for group A streptococci by precipitin method, 1,552 were also positive by the FA technique—sensitivity 99.4 per cent—and of the 1,236 negative specimens the FA

* Laboratories Branch, Hawaii State Department of Health. Mr. Tanimoto is Assistant Chief of Laboratories; Mr. Miyasato and Mr. Ching are Microbiologist and Supervisor, respectively, of Medical Microbiology.

† The initiation of this service was made possible through the financial assistance of the PHS Heart Disease Control Program, USDHEW.

‡ Purchased from the Sylvana Company.

§ Difco Laboratories.

Received for publication June 10, 1965.

was negative in 1,235—specificity 99.9 per cent. The 1,236 non–group A streptococci encountered among the 9,712 throat swabs examined during the twenty-two-month period were as follows: 322 group B (3.3%), 93 group C (1.0%), 121 group G (1.2%) and 700 nongroupable (7.2%).

The FA technique has proved so effective, economical, convenient, and time-saving (findings reportable one day after receipt of specimens as compared with the precipitin procedure which generally required three to five days) that it has been used exclusively since November, 1963.

GROUP A IS LOW IN HAWAII

During the three-year period, 1962-64, a total of 28,877 throat swabs were submitted to the State Health Department laboratories in Honolulu. Beta hemolytic streptococci were found in 5,281 or 18.3 per cent, and group A streptococci in 3,020 or 10.5 per cent (Table 2). Slightly over one-half (57.2 per cent) of the beta hemolytic streptococci were found to be group A, a cogent reason for differentiating the group A streptococci in Hawaii. In Wisconsin over 90 per cent of the beta hemolytic streptococci were found to be group A (consecutively in 1962, 1963, and 1964).

NO SEASONAL FLUCTUATION NOTED

The number of specimens submitted increased from 369 in January, 1962, to 1,059 in December, 1964. The maximum number, 1,518 specimens, was submitted in October, 1936 (Fig. 1). The peak specimen submissions were in April and October with the slump occurring during the summer months.

The percentage recovery rates of group A and beta hemolytic streptococci from throat swabs remained comparatively stable throughout the three-year period, i.e., the occurrence of these organisms fluctuated proportionally with the number of specimens submitted.

There was no sudden or alarming increase during any particular month or season. The average recovery rates of group A streptococci were 9.7 per cent in 1962 (extremes of 6.8 to 13.6 per cent per month), 9.1 per cent in 1963 (extremes of 7.1 to 11.3 per cent), and 12.6 per cent in 1964 (extremes of 10.2 to 14.8 per cent). The medians of these years were 9.75, 9.55, and 12.50 per cent respectively, suggesting a slightly higher occurrence of group A streptococci in 1964 as compared with the two previous years.

In comparison with the foregoing figures, the Connecticut state laboratory experienced a 22.4 per cent group A recovery in 1962 and 25.5 per cent in 1963; Colorado 22.3 per cent and 20.5 per cent; and Wisconsin 20.4 per cent and 23.4 per cent, respectively.

Other investigators have reported group A incidence rates ranging widely from five to 14 per cent in studies of healthy children's throats and 20 to 40 per cent in children with sore throats in an endemic area. Stollerman (1961) found 41.3 per cent of 2,545 children with pharyngitis harboring group A streptococci in their throats. Poskanzer and coworkers (1956), in a study of two streptococcal outbreaks in rural communities, noted 50 per cent of children in kindergarten through fifth grade, and 26 per cent of those in grades six through 12, with group A streptococci, whereas in the second community the rates for corresponding age groups were 70 per cent and 24 per cent. McGuire (1960) concluded from a study of over 10,000 throat cultures from supposedly healthy school children that an eight to ten per cent incidence of group A streptococci is suggestive of nonepidemic conditions and 15 to 30 per cent or more for pre-epidemic and epidemic times.

BACITRACIN DISC METHOD PRACTICAL

For the presumptive identification of group A streptococci, the bacitracin disc method was found to be practical, reliable, and inexpensive.

Beta hemolytic streptococci isolated from 1,757

TABLE 2.—*Occurrence of Group A and Beta Hemolytic Streptococci in 28,877 Throat Swabs by Year (1962–1964).*

		YEAR			
		1962	1963	1964	THREE YEARS (1962-64)
Number of Specimens Examined		7,196	11,549	10,132	28,877
Beta Hemolytic Streptococci:	Number	1,228	1,880	2,173	5,281
	Average, %	17.1	16.3	21.4	18.3
	Median, %	17.55	16.45	20.65	17.85
	Extremes, %	11.0–21.1	11.3–18.0	18.0–27.2	11.0–27.2
Group A Streptococci:	Number	697	1,048	1,275	3,020
	Average, %	9.7	9.1	12.6	10.5
	Median, %	9.75	9.55	12.5	10.2
	Extremes, %	6.8–13.6	7.1–11.3	10.2–14.8	6.8–14.8
Per Cent of Hemolytic Cultures Positive for Group A Streptococci:	Average	56.8	55.7	58.7	57.2
	Median	56.25	55.95	61.35	57.2
	Extremes	50.7–63.4	43.7–69.9	46.7–68.1	43.7–69.9

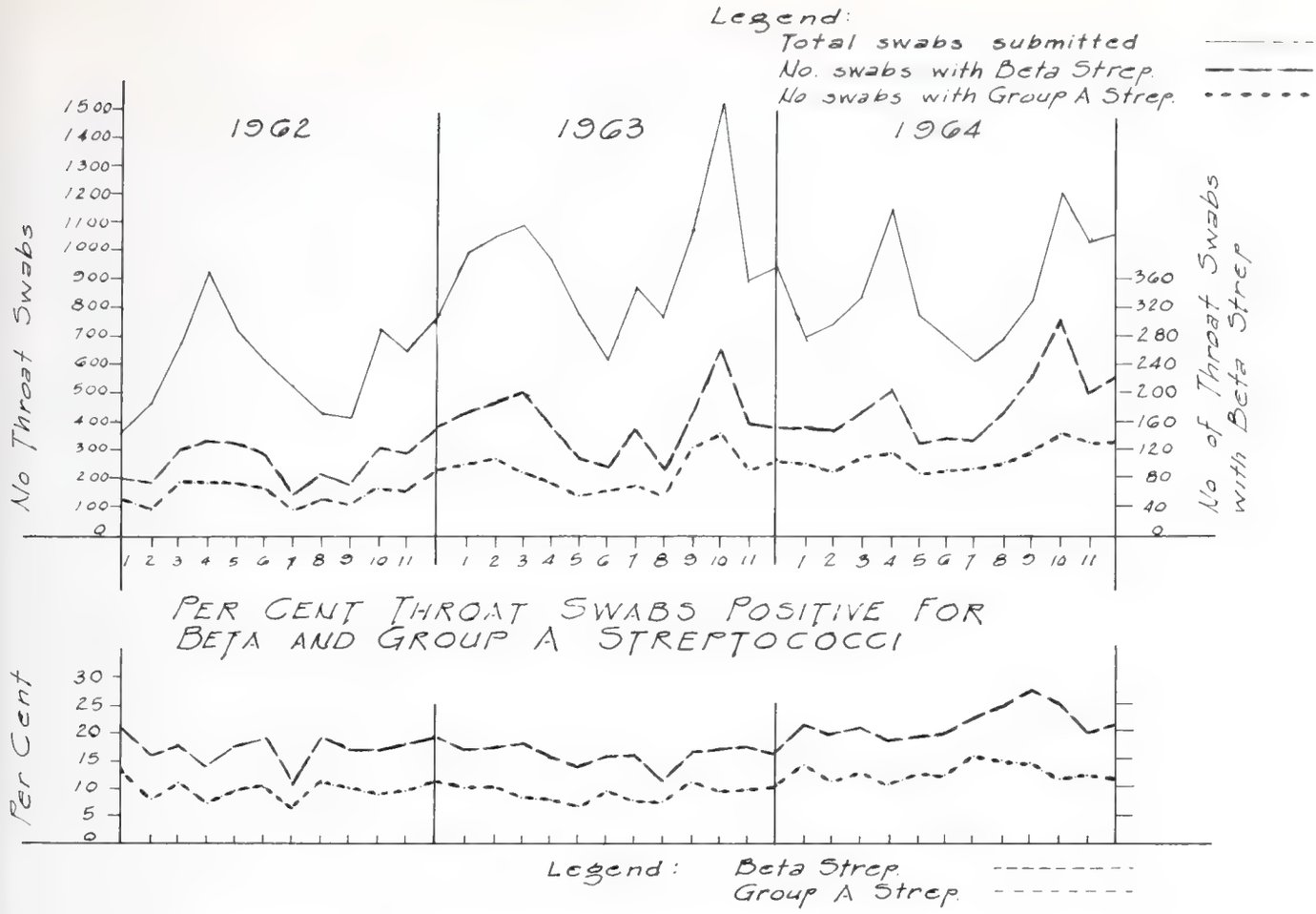


FIGURE 1.—*Occurrence of Beta Hemolytic and Group A Streptococci in Throat Swabs by Month January 1962–December 1964.*

blood agar plates were subjected to both the bacitracin (BBL Taxo A)* and the precipitin procedures. As shown in Table 3, 923 of these cultures were group A streptococci by both techniques and 808 were non-group A—an agreement of 98.5 per cent between the two procedures. Although all streptococci identified as group A by the precipitin test were also detected by the bacitracin disc method (sensitivity 100 per cent), there were 26 among the 834 non-group A cultures which manifested sufficiently large zones (10 to 15 mm) to give false positive readings (specificity 96.9 per cent). The precipitin test findings on these cultures were three group B, ten group C, seven group G, and six nongroupable.

TABLE 3.—*Comparison of Bacitracin Disc and Precipitin Methods for the Identification of Group A Streptococci on 1,757 Cultures.*

		GROUP A BY PRECIPITIN TEST		
		+	—	Total
Group A by Taxo A	+	923	26	949
	—	0	808	808
	TOTAL	923	834	1,757

Sensitivity 100.0%, Specificity 96.9%
Total agreement 98.5%

The bacitracin disc test can be performed in any laboratory equipped to do streptococcal isolation work, no more than two to three days being required for the completion of the test.

* Baltimore Biological Laboratory, Inc.

SUMMARY

An examination of 28,877 throat swabs during the three years, 1962-64, disclosed beta hemolytic streptococci in 18.3 per cent and group A streptococci in 10.5 per cent.

No seasonal fluctuation or alarming increase of group A beta hemolytic streptococci was noted during this period.

The monthly recovery rates of group A and beta hemolytic streptococci remained comparatively stable with group A accounting for a little over one-half of the beta hemolytic streptococci isolated.

The fluorescent antibody identification of group A streptococci was found to be rapid, accurate, expedient, and highly effective.

If the FA or the precipitin method is not feasible a presumptive identification of group A streptococci is possible by the bacitracin disc method. This certainly is within the economic reach of any diagnostic laboratory, regardless of size. ■

REFERENCES

1. Stollerman, G. H.: Factors determining the attack rate of rheumatic fever, JAMA 177(12), 81-86 (Sept. 23) 1964.
2. Poskanzer, D. D., et. al.: Epidemiology of civilian streptococcal outbreaks before and after penicillin prophylaxis, Amer. J. Pub. Health 46(12), 1513-24 (Dec.) 1956.
3. McGuire, C. D.: The Conejos County Study. Presented at the Fourth Fluorescent Antibody Streptococcal Seminar, Cleveland, Ohio, June 8-10, 1960.

Group A beta hemolytic streptococci were found in under two per cent of rheumatic patients on drug prophylaxis, over eight per cent of URI cases, and 17 per cent of patients awaiting tonsillectomy.

Streptococcal Survey in Hawaii

Study Among Unselected Children with Respiratory Infections

L. T. CHUN, M.D., and
MARJORIE DOLE, M.S.,* *Honolulu*

• *Unselected respiratory disease cases in Hawaii examined by the bacitracin disc method yielded throat cultures of beta hemolytic streptococci in 14.9%; 57% of these were group A. Highest incidences were found in children aged six through thirteen (15.6%) and in patients awaiting tonsillectomy (13% for all, 17.1% for children six through thirteen). Correlation between the bacitracin disc method and the conventional precipitin test was very good.*

A THROAT culture survey for group A beta hemolytic streptococci in children was conducted at the Kauikeolani Children's Hospital (KCH) from August, 1961, to November, 1962. The primary objective of the study was to determine the incidence of group A beta hemolytic streptococci from throat cultures of unselected children with respiratory infections. Additional information was gathered on the incidence of group A beta hemolytic streptococci from pre-op tonsillectomy and adenoidectomy (T&A) cases, rheumatic fever patients on drug prophylaxis, and school children. A correlation of the conventional precipitin test and bacitracin disc method for the identification of group A beta hemolytic streptococci was also done.

The majority of cultures were obtained from unselected pediatric patients with upper respiratory symptoms regardless of whether streptococcal disease was suspected. These specimens were submitted by the KCH outpatient department (OPD)

GROUPS OF BETA HEMOLYTIC STREP.	NUMBER	PER CENT
A	568	57
OTHERS	429	43
TOTAL	997	100

PERCENTAGE GROUP A AND OTHER GROUPS OF BETA HEMOLYTIC STREPTOCOCCI (14.9% OF 6,678 CULTURES)

GROUPS OTHER THAN GROUP A	NUMBER	PER CENT
B	71	16.6
C	56	13.0
F	9	2.1
G	45	10.5
NON-GROUPABLE	182	42.4
NOT A	66	15.4
TOTAL	429	100

BREAKDOWN OF OTHER GROUPS OF BETA HEMOLYTIC STREPTOCOCCI THAN A.

* From the Kauikeolani Children's Hospital, Honolulu, Hawaii. Reprint requests to 30 Aulike St., Kailua, Hawaii (L.T.C.).

as well as by private practitioners. Subsurveys were also made of (a) patients admitted to the hospital, including pre-op T&A cases, (b) rheumatic fever patients on drug prophylaxis, and (c) children attending schools.

SOURCE MATERIAL AND METHODS

Physicians participating in the program were asked to furnish the following information when submitting a throat culture: name, age, sex, and where the patient was seen; date and time the specimen was collected; whether a respiratory condition existed and, if so, whether streptococcal disease was suspected; presence or absence of tonsils; and whether antimicrobials were used within 72 hours before the throat was cultured.

Throats were cultured by swabbing the postpharyngeal areas and avoiding the tonsils when possible. This method was used to determine the recovery rate of streptococci from the pharynx proper independently of the tonsils. Todd-Hewitt broth was dispensed in 1 ml amounts in 13 x 100 mm tubes. The charged swab was moistened with this broth, suspended in the tube by means of the cotton plug, and stored at 4° C until brought to the laboratory within 24 hours. Care was taken not to leave the swab soaking in the broth, in order to minimize growth of organisms during storage.

In the laboratory, each throat swab was agitated in the broth, pressed against the sides of the tube and streaked on the surface of a neopeptone agar plate containing 2.5% defibrinated sheep blood. In addition, pour plates were made from the remaining broth by inoculating melted media containing sheep blood. All plates were incubated for 18 to 24 hours and then examined for beta hemolytic colonies. Usually, three different isolated colonies showing strep-type growth with beta hemolysis were subcultured: one to serve as a reference subculture, one for the bacitracin test†, and one to 30 ml of Todd-Hewitt broth for the precipitin test. A subculture from the broth was sand desiccated in vacuo (a technique described by Frobisher *et al*[1]) and stored after its purity was confirmed and after the bacitracin and precipitin tests indicated that it was a group A beta hemolytic streptococcus. Groups other than A were determined by the precipitin test only.

The results of the survey were transferred to IBM cards and programmed by the Statistical and Computing Center of the University of Hawaii.

RESULTS

The over-all incidence for group A beta hemolytic streptococci was 8.5 per cent among 6,678 unselected respiratory disease cases. The over-all incidence of other groups—B, C, F, G, and nongroupable beta hemolytic streptococci—was 6.4 per cent.

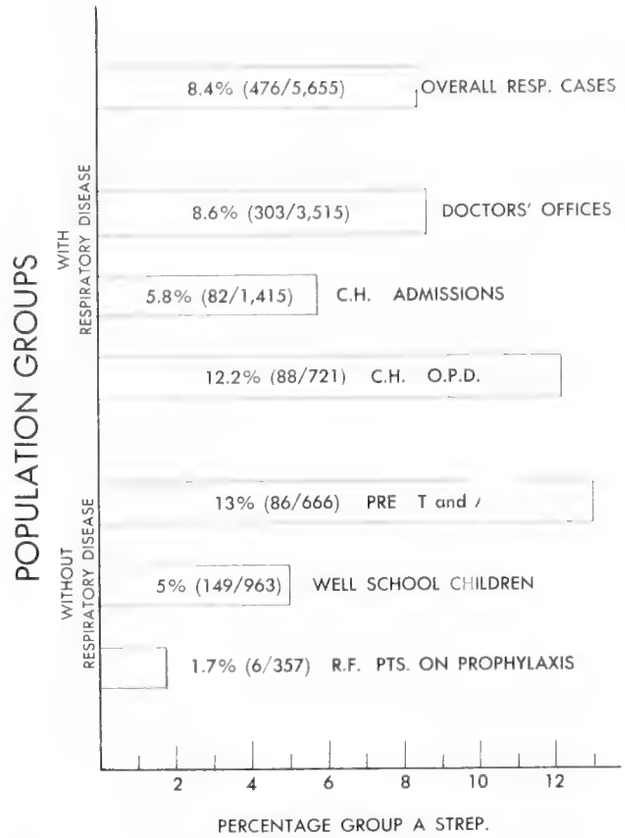


FIG. 1.—*Incidence of group A beta hemolytic streptococci from different population groups.*

GROUP DESIGNATION OF STREPTOCOCCI

The group designation of 790 strains of beta hemolytic streptococci was determined by both the bacitracin and the precipitin test. The close agreement between these two tests has been reported by others, [2,3,4] and was confirmed in our studies. Only 5.5 per cent of cultures which caused a precipitate with antisera to group A antigen were not confirmed with the bacitracin test. Strains yielding precipitates with the sera of groups other than A or which were nongroupable represented 2.3 per cent of positive bacitracin tests.

SEASONAL INCIDENCE

In Hawaii, there is very little temperature variation between the summer and winter months but it is not unusual for practitioners to encounter more streptococcal infections at the beginning of the school year in September and October. This was reflected in the survey where the highest incidence (12%) occurred during these months. The lowest incidence was in May (4%) and March (5%).

† Discs containing 0.02 units bacitracin—Case Laboratories.

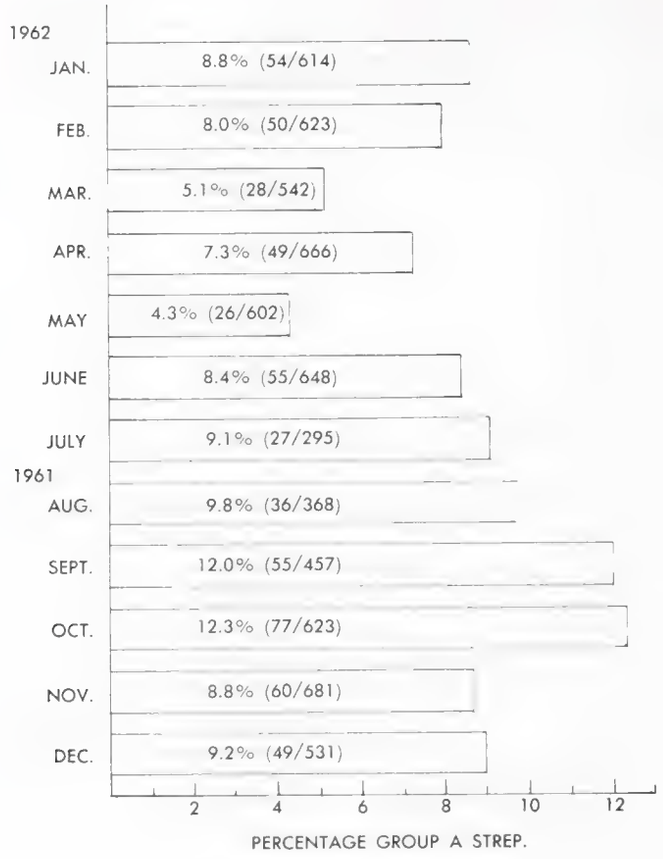


FIG. 2.—*Incidence of group A beta hemolytic streptococci by month (6,678 cultures). The number of positives with the total number of throat cultures for each month is indicated in parenthesis.*

INCIDENCE: SEX AND AGE

There was no significant difference in the streptococcal incidence between the sexes. Group A beta hemolytic streptococci were isolated from the throats of 8.8 per cent of 3,144 males compared with 8.2 per cent of 2,523 females.

The 6- through 13-year-old group had an over-all streptococcal incidence of 15.6 per cent with a range of 13.1 per cent to 19.6 per cent. There were 1,733 patients included in this group. No streptococci were recovered from 1,301 infants up through one year of age. The streptococcal incidence for the 2- through 5-year-olds was 191 out of 2,469 (7.6%) and for the 14- through 19-year-olds, 12 out of 157 (7.6%).

TONSILS

There was some difference noted in the incidence of streptococci isolated from patients with upper respiratory symptoms who had tonsils as compared with those who did not. Of 6,219 patients whose tonsils were present, 8.6 per cent were positive for group A streptococci; 6.7 per cent of 459 patients who had no tonsils were positive.

Throat cultures were obtained from 660 children admitted to KCH for T&A. Beta hemolytic streptococci were recovered from 164 (24.6%) of which 86 (13%) were group A. The remaining 78 out of 666 (11.7%) were streptococci belonging to other groups or which were non-groupable. Nearly all of the patients in this sample were free of respiratory infections.

INFLUENCE OF ANTIMICROBIALS

When antimicrobials were used during the 72 hours prior to culturing the throat, group A beta hemolytic streptococci were recovered from 4 per cent of 918 patients as compared with 9.2 per cent of 5,760 who were not given antimicrobials.

STREPTOCOCCAL SURVEY OF SCHOOL CHILDREN

The throats of first and second graders were swabbed at St. Terese, a parochial school, and Lanakila, a public school. The schools were visited once a month in October, 1961, and in January, February, April, and May of 1962. On each return visit to the respective schools the same pupils were cultured. Notations were made on whether an upper respiratory infection existed and whether the tonsils were present or absent.

A total of 963 throat swabs were cultured of which 49 were positive for group A beta hemolytic streptococci, an over-all incidence of 5 per cent. The incidence of streptococci in those with respiratory infections was the same as in children

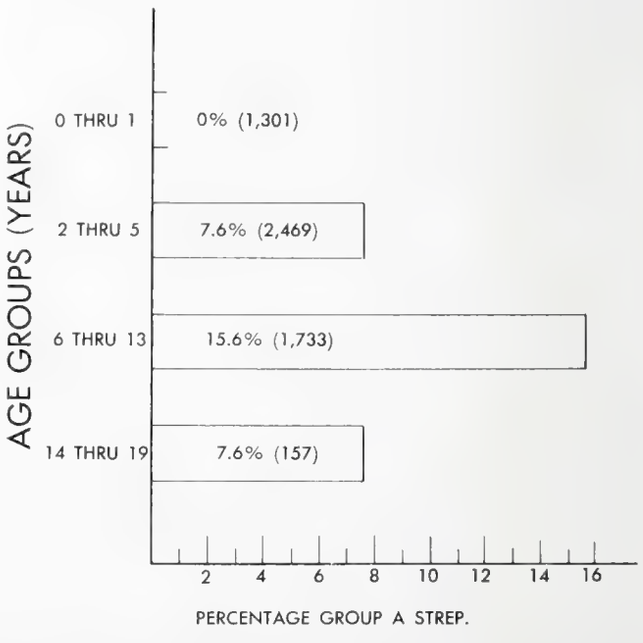


FIG. 3.—*Streptococcal incidence by age groups (5,660 cultures). The number of throat cultures is indicated in parenthesis.*

without. There were 821 students with tonsils of whom 5 per cent had positive cultures for streptococci. Of the 142 students without tonsils, streptococci were recovered from three (2%).

RHEUMATIC FEVER PATIENTS ON PROPHYLAXIS

Rheumatic fever patients were examined at the Bureau of Crippled Children's Cardiac Clinic at KCH. All patients had been on drug prophylaxis at the time of the study. The drugs most commonly used were benzathine penicillin G (Bicillin, Long-Acting) 1,200,000 units every 28 days—used 176 times; penicillin G 250,000 units one to two times a day—used 118 times; sulfadiazine, 0.5 gram two times a day—used 14 times.

A total of 357 throats were cultured during the survey period and beta hemolytic streptococci were recovered from 9 per cent of which group A streptococci were isolated from six specimens (1.7%) and the remaining 7.3 per cent were other strains of beta hemolytic streptococci.

Six positive cultures of group A streptococci were isolated from three patients with rheumatic heart disease. One patient who was on sulfadiazine prophylaxis had four consecutive positive cultures. He was later placed on erythromycin with no success and the streptococci were eradicated only after his tonsils were removed. Penicillin was not used because of the patient's sensitivity to it. A second patient was on penicillin G 250,000 units two times a day. A third patient had been without penicillin prophylaxis for two months at the time his throat was cultured. In none of the patients was there a reactivation of rheumatic fever.

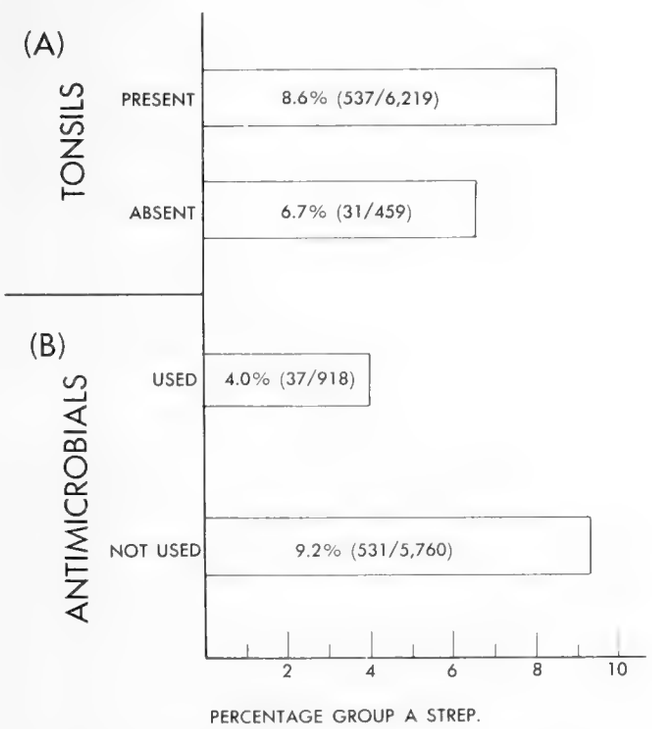


FIG. 4.—*(A) Incidence of group A beta hemolytic streptococci in relation to tonsils. (B) Incidence of group A beta hemolytic streptococci in relation to whether antimicrobials where used prior to obtaining the throat cultures. The number of positives with the total number of cultures is indicated in parenthesis.*

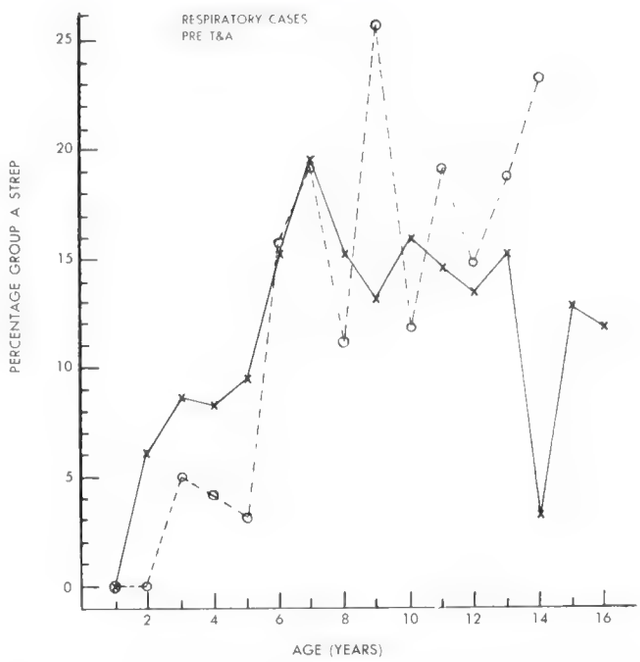


FIG. 5.—*Incidence of group A beta hemolytic streptococci according to age in respiratory cases (474) and pre T and A cases (86).*

OTHER GROUPS THAN GROUP A

An analysis of 6,678 throat cultures showed that 997 (14.9%) were positive for beta hemolytic streptococci. Of the 997 beta hemolytic streptococci, 57 per cent were group A and the other 43 per cent represented other groups. The order of frequency of the outer groups was as follows—Group B, 16.6 per cent; C, 13 per cent; G, 10.5 per cent; F, 2.1 per cent; nongroupables, 42.4 per cent; not A, 15.4 per cent.‡ No group D was identified.

TYPES OF GROUP A

Typing sera were made available by the Communicable Disease Center. Random samples of 104 group A streptococci isolated from the throat were typed. The following types and numbers of each were encountered. Nine type 39; eight type 1; three each of types 8, 12, 44; two each of types 15 and 46; one each of types 2, 25, 40; and 71 nontypable.

‡ Those beta hemolytic streptococci not completely identified.

COMMENTS

In Hawaii, the over-all incidence of group A beta hemolytic streptococci from unselected patients with respiratory infections was eight and one-half per cent with a range of four per cent to twelve per cent in a 16-month period. The highest incidence was in the months of September and October and the lowest was in March and May. This seasonal variation may be due to environmental factors other than changes in weather as there is very little variation in temperature between the winter and summer months. The months of September and October represent the time of the year when children return to schools and are suddenly thrown together in the close confines of class rooms where the exposure risk to streptococcal disease is greater. In a streptococcal survey in Hawaii during the months of November, 1961, through December, 1962, Tanimoto *et al*[2] found an over-all incidence of 9.8 per cent group A beta hemolytic streptococci from selected respiratory disease cases suspected of having streptococcal infections.

School children well enough to attend classes had an over-all group A streptococcal incidence of five per cent regardless of whether an upper respiratory infection existed. This is lower than that reported by Nicholas and Steele[6] and Cornfeld *et al*,[7] who found streptococcal incidences of six to 22 per cent and seven to 28 per cent respectively. The five per cent recovery rate of streptococci from school children is slightly lower than the over-all incidence of eight and one-half per cent from children with unselected respiratory infections.

No difference was found in the streptococcal incidence between males and females. As might be expected, when antimicrobials were used prior to swabbing the throat, the cultural recovery rate for streptococci was lower.

It appears in this survey that the isolation of streptococci may be more dependent on a child's exposure to streptococcal disease regardless of age. The streptococcal incidence was highest (15.6%) in the six through 13-year-old group, whose chances of exposure to streptococcal disease are greater than those under six years of age or over 13 years of age (7.6% incidence).

There appears to be a slightly higher incidence of streptococci among those patients with upper respiratory symptoms who retained their tonsils—8.6 per cent versus 6.4 per cent of those without tonsils. School children with tonsils had an incidence of five per cent, as contrasted with two per cent of pupils with no tonsils. Nicholas and Steele[6] reported school children with tonsils carried group A streptococci 3.2 times as often as those without tonsils.

The pre-op T&A patients had an over-all streptococcal incidence of 13 per cent which is higher than the over-all incidence of eight and one-half per cent among unselected cases of respiratory infections. Saslaw *et al*[8] have reported streptococcal incidence up to 24.7 per cent in patients prior to T&A. Though the pre-op T&A patients had a higher over-all streptococcal incidence than the respiratory disease cases, the difference is not marked when the age factor is considered as shown in Fig. 5. The group A streptococcal incidence in both groups followed the same general pattern. There was a low incidence up to five years of age (respiratory cases two to five years of age—7.6 per cent out of 2,469 cultures; pre-T&A cases three to five years of age—3.6 per cent of 194 cultures) and an abrupt rise at six years with a sustained plateau up to 13 years of age (respiratory cases 15.6 per cent of 1,733 cultures and pre-T&A cases 17.1 per cent of 439 cultures).

Rheumatic fever patients on drug prophylaxis had an incidence of 1.7 per cent group A beta hemolytic streptococci. This represented six of 357 cultures. One patient accounted for four of the six positive cultures. This represents a low "break-through" rate of streptococci as contrasted to the Irvington House Prophylaxis Study[9] where there was a "break-through" of seven per cent with the intramuscular penicillin group, 22 per cent with the oral penicillin group, and 24 per cent with the sulfadiazine group.

Group A streptococci represented only 57 per cent of the beta hemolytic cultures isolated, the remaining 43 per cent represented other groups and non-groupables. Tanimoto *et al*[5] had the same experience in their study of streptococcal disease in Hawaii from selected respiratory disease cases suspected of having streptococcal infections. During the years 1963, 1964, 1965, they reported 55 per cent to 60 per cent of the beta hemolytic streptococci as group A. A throat culture survey by Myers *et al*[10] showed 15.3 per cent of the beta hemolytic streptococci as group A. Their study was on an Indian population from southern India where the climate was warm with temperature ranging from 68 to 98 degrees.

Higher group A percentages of beta hemolytic streptococci are reported from the mainland United States. Siegel *et al*[11] and Hollinger *et al*[12] reported 86 per cent to 82 per cent of the beta hemolytic streptococci isolated from pharyngitis cases belonged to group A. Quinn[13] reported 70 per cent to 78 per cent group A percentages of beta hemolytic streptococci from school children. Along with Myers *et al*[10] we also would raise the

question of whether the warmer climate is a factor in the lower group A incidence of beta hemolytic streptococci.

Tanimoto's and our experience would indicate that in Hawaii, it is especially desirable to differentiate the group A streptococci from other groups of beta hemolytic streptococci. For the proper management of group A beta hemolytic streptococcal infection as recommended by the American Heart Association[14] a laboratory report on throat cultures positive for beta hemolytic streptococci alone would be incomplete without a group A determination. There would be about a 50 per cent chance of unnecessarily prolonging the patient's treatment if the group designation of the beta hemolytic streptococci were not known.

There was a high correlation of the precipitin and bacitracin disc methods in identifying group A beta hemolytic streptococci. The latter method affords an easy and practical way for the identification of group A streptococci both in the clinical laboratories and office practice.

SUMMARY

1. During the period August 1961, to November, 1962, the over-all incidence of group A beta hemolytic streptococci was 8.5 per cent from unselected respiratory disease cases in Hawaii.

2. The incidence of beta hemolytic streptococci was 14.9 per cent and of these, 57 per cent were group A.

3. The highest seasonal incidence of group A streptococcal infection was in September and October. The lowest incidence was in the months of March, April, and May.

4. There is no significant difference in streptococcal infections between the sexes. The age group, six through thirteen years of age, had the highest group A streptococcal incidence. (15.6%).

5. The use of antimicrobials prior to obtaining throat cultures lessened the chances of recovering streptococci from the throat.

6. Throat cultures prior to tonsillectomy yielded group A streptococci in 13 per cent. In the age group six through thirteen years the incidence was 17.1 per cent.

7. Among school children, the over-all incidence of streptococcal infection was five per cent.

8. Rheumatic fever patients on drug prophylaxis had a streptococcal "break-through" rate of 1.7 per cent.

9. The importance of identifying the group of beta hemolytic streptococci in Hawaii is emphasized because group A represents only 57 per cent of all the beta hemolytic streptococci.

10. The bacitracin disc method is a reliable, easy, and practical method for identifying group A beta hemolytic streptococci.

ACKNOWLEDGMENTS

This study was supported by the Hawaii Heart Association, The Department of Health—Bureau of Adult Health, Wyeth Laboratories, and The Straub Medical Research Institute of Hawaii.

The typing sera were supplied by the Communicable Disease Center.

The compilation and statistical analysis of data were done by Dr. Edwin Mookini of the University of Hawaii.

The attending physicians of Kauikeolani Children's Hospital supplied most of the throat cultures.

The survey on school children was through the cooperation of the Department of Public Education and Catholic Schools.

Much help and support for the project were given by the following: Dr. Warren Wheeler, Dr. Albert Dorfman, Dr. Morris Shaffer, Dr. Lewis Wannamaker, Dr. Kingston Wilcox, and Mr. Ralph Tanimoto. ■

REFERENCES

1. Frobisher, M. J., Parsons, E. I., Pai, S. E., Hakins, S.: A simplified method for the preservation of bacteria by desiccation in Vacuo, J. Lab. Clin. Med. 32:1008 (Aug.) 1947.
2. Stollerman, G. H.: The role of selective throat culture for beta hemolytic streptococci in the diagnosis of acute pharyngitis, Amer. J. Clin. Path. 37:36-40 (Jan.) 1962.
3. Maxted, W. R.: The use of bacitracin for identifying group A hemolytic streptococci, J. Clin. Path. 6:224-226 (Aug.) 1953.
4. Levinson, M. L., Frank, P. F.: Differentiation of group A from other beta hemolytic streptococci with bacitracin, J. Bact. 69: 284-287 (Mar.) 1955.
5. Tanimoto, R. H., Miyasato, C., Ching, G.: A three year study of beta hemolytic streptococci in throat swabs—1962-1964, unpublished data.
6. Nicholas, W. C., Steele, C. P.: Occurrence of groupable beta hemolytic streptococci—study among school children in Bismarck, N.D., JAMA 181:197-205 (July 21) 1962.
7. Cornfeld, D., Hubbard, J. P., Harris, T. N.: Epidemiologic studies of streptococcal infection in school children, Amer. J. Public Health 51:242-249 (Feb.) 1961.
8. Saslaw, M. S., Jablon, J. M., Jenke, S. A., Branch, C. C.: Beta hemolytic streptococci in tonsillar tissue, Amer. J. Dis. Child. 103:51-58 (Jan.) 1962.
9. Wood, H. F.: Prophylaxis of rheumatic fever, Publication Patterns of Disease (Dec.) 1959.
10. Myers, R. M., Koshy, G.: Beta hemolytic streptococci in survey throat cultures in an Indian population, Amer. J. Public Health 51:1872-1892 (Dec.) 1961.
11. Siegel, A. C., Johnson, E. E., Stollerman, G. H.: Controlled studies of streptococcal pharyngitis in a pediatric population—I, New Eng. J. Med. 265:559-566 (Sept. 21) 1961.
12. Hollinger, N. F., Rantz, L.: In pursuit of the streptococcus, Pediatrics 24:1112-1117 (Dec.) 1959.
13. Quinn, R. W.: Carrier rate for hemolytic streptococci in school children, Amer. J. Epid. 82:1-13 (July) 1965.
14. Prevention of rheumatic fever and bacterial endocarditis through control of streptococcal infections: American Heart Association.

Cytology, especially in detection of pre-cancers in the female genital tract, is still in the refining process.

Cytology, an Increasingly Valuable Tool in Cancer Detection

E. GORDON DICKIE, M.D.,* *Honolulu*

• *Cytologic examination of smears from the uterine cervix can disclose with increasing accuracy a condition now called dysplasia, which probably progresses to carcinoma in situ in at least a few per cent of cases, perhaps over a period of eight or ten years. Cytology is also able to detect with increasing accuracy the stages of carcinoma* in situ *and invasive carcinoma. Its accuracy may be enhanced by communication between the cytologist and the clinician, and also by biopsy, which is ultimately necessary anyway for a diagnosis of cancer.*

WHEN PAPANICOLAOU first published his observations on vaginal cytology in 1928, they were largely ignored. It was not that pathologists doubted his observations; they doubted the practicality of his findings. Not until publication of his classic monograph with Traut, "Diagnosis of Uterine Cancer by the Vaginal Smear," in 1943,[1] did the medical world begin to fully appreciate the possibility of this new approach to cancer diagnosis.

Today this knowledge is an extremely important diagnostic tool in the armamentarium of the practicing physician. However, this science is still in its adolescent state. Only in the last few years has it come to be recognized as a subspecialty of pathology, requiring additional training of an already-qualified pathologist. Due to limited teaching material and sometimes incomplete comprehension of the new concepts of cytology, there are relatively few cytologists in this country who can adequately teach other physicians.

* Medical Director, Clinical Cytologist, Hawaii Cytology Laboratory.

Received for publication November 16, 1964.

PAP'S CLASSES REVISED

To indicate the degree of neoplastic involvement, Papanicolaou introduced the class system of evaluating cells in the vaginal smear. Because cytology has progressed much since the introduction of this system, several institutions have modified his original classification or have substituted their own; none of these has come to standard usage.

To give the patient the greatest benefit, the clinician should be furnished an interpretation of vaginal smears in standardized terminology, which can be correlated statistically with prognosis of the lesion in question. The present improved understanding of these lesions should permit them to be referred to by name, and the degree of involvement indicated.

Papanicolaou's Class III is possibly the most nondescript term in our medical vocabulary. It may include everything from the presence of a few atypical cells to malignant cells from a metastatic breast carcinoma, the origin of which had not been determined. Class III is now a nebulous, hodge-podge, wastebasket category into which all doubtful slides are dropped. Instead of saying, "I don't know," the pathologist may send a report of "Class III," possibly with a request for a repeat smear, at the clinician's discretion. The interpretation of Class III by the clinician may depend on the medical center where he was trained, and the management on what is advocated in the latest

TABLE 1.—*Classification of Lesion*

CELL NO.
NUCLEUS
- Multiple
- Round
- Oval
- Irregular
- Compressed
- Membr. dist.
- Membr. indist.
- Membr. thick
- Membr. thin
- Vacuolated

NUCLEOLI
- Micro
- Macro
- Pseudo
- Single
- Multiple
- Round
- Irregular

CHROMATIN
- Finely gran. with irreg. clumping
- Finely gran. with strands
- Finely gran. with peripheral clumps
- Uniform coarse gran.
- Irreg. coarse gran.
- Trans./opaque

HYPERCHROMASIA
- 1+
- 2+
- 3+
- 4+

MITOSES (Incl. prophase)
- Occasional
- Few
- Many

CYTOPLASM
- Abundant
- Scanty
- Borders distinct
- Borders indistinct
- Eosinophilic
- Basophilic
- Neutral
- Granular
- Finely vacuolated
- Homogeneous

CYTOPLASMIC VACUOLES
- Single
- Multiple
- Within cell confined
- Bulge cell border
- Opaque
- Inflammatory (polys)
- Clear
- Overlie nucleus
- Depress nucleus

INTERCELL. WINDOWS
WITHIN CELL CLUSTER
NO. CELLS PER CLUSTER
NUCLEAR VOUME
CYTOPLASMIC VOLUME
N/C RATIO

journal, regardless of the qualifications of the author.

Needle biopsies of liver, kidney, and lung having become so prevalent in recent years, it would seem that comparably small bits of tissue could be processed for the detection of cancers of the female reproductive tract, at least more frequently than is now the case.

REAGAN'S CONTRIBUTIONS

James Reagan, Professor of Pathology at Western Reserve University, having a great interest in gynecological exfoliative cytology, realized over a decade ago[2] that correlation between cytology and histology was necessary to proper understanding and diagnosis of the various lesions seen in gynecological pathology. His work is being recognized as perhaps the most valuable in the field of cancer detection since Papanicolaou's. Since the Cleveland Clinic laboratory was among the first in the country where the importance of cancer detection by the use of cytology was stressed several hundred thousand cases have been amassed there. This material has been used in Reagan's investigations.

TABLE 2.—*Cellular Morphology*

Endometrial carcinoma study.

Broders:

Duke's:

Name.....

Path. No.....

.....

Tumor Pattern
- papillary
- glandular
- medullary (sheets)
- acinar
- tubular
- plexiform (cords)
- scirrhous
- clear cell type

Degree of disorganization

Gland
- convolutions
- sizes
 - normal
 - smaller
 - larger
 - variable
 - secretion
- lumen
 - normal
 - smaller
 - larger
 - variable
 - secretion
- compressed

Cells
- one cell thick
- stratified (multi)
- both
- cell polarity
- cell sizes
 - normal
 - smaller
 - larger
 - variable
- cell shape
 - columnar
 - cuboidal
 - polyhedral
 - bizarre
- N/C ratio

Cytoplasm
- eosinophilic
- basophilic
- neutral
- abundant
- scanty
- vacuolization
 - fine
 - large
 - single (clear cells)
 - polys in vacuoles
- granular
- homogenous

Nuclei
- multiple
- single
- position to cell
 - basal
 - central
 - superficial
- size variation
- hyperchromasia
- chromatin
 - finely granular
 - coarse
 - opaque
- nuclear membrane
 - thin
 - thick
- mitotic figures
- nucleoli
 - micro
 - macro

Free cells
- cell cluster
- isolated malignant cells
- histiocytes
- foam cells
- stromal cells
- free gland fragments
- polys
- lymphocytes
- red cells
- oxyphilic cells
- sq. metaplastic cells

Stromal changes
- tumor cell invasion
- foam cell histiocytes
- degree of crowding
- stromal activity
 - normal
 - active
 - fibrous
- inflammation
- necrosis

Metaplastic tissue
- *squamous*
 - keratinized
 - non-keratinization
- intermediate type
- degenerative change
- superficial
- deep
- *oxyphilic cells*
 - in sheets
 - part of gland
 - eosinophilic
 - central nucl.
 - eccentric nucl.
 - surface
 - deep
- *stromal-like metaplasia*
 - in gland
 - in stroma
 - superficial
 - deep

Adj. endometrium
- CIS
- hyperplastic
- cystic
- atrophy
- normal—secret. prolif.

Adj. stroma
- normal
- active
- inflam.

Vessels
- tumor invasion
- tumor cells in lumen

TABLE 3.—*Comparison of Cellular Changes in Normal, Precancerous, and Cancerous Lesions of Uterine Cervix on Study of Cervical Scrapings and Cervical Aspirations.*

	NORMAL	DYS-PLASIA	POST-IRRAD. DYS-PLASIA	IN SITU CANCER	INV. CANCER	GROUP I INV. CA.	GROUP II INV. CA.	GROUP III INV. CA.	ADE-NOCA. CERVIX	ADE-NOCA. ENDO-MET-RIUM
No. of cases studied:	100	100	28	100	100	24	41	35	8=	8
Mean cell area (sq. micra)	1604.15†	1087.59*	593.6	351.51*	229.49†	274.6	255.9	169.1		
Cell shape										
Polyhedral	93.95	52.66	40.6	8.19	2.05					
Round	0.94	20.58	.7	52.63	45.98					
Oval	2.78	21.02	35.4	31.41	30.53					
Ellipsoidal	1.20	4.00		1.67	0.54					
Irregular	0.21	0.20	20.0	4.08	5.17					
Elongate	0.01	1.50	2.4	1.76	15.08					
Tadpole	0.00	0.02	.9	0.26	0.65	15.0*	0.4*	0.2*		
Isodiametric forms	94.89	73.26	41.3	60.82	48.03	(*Totals of elongate and caudate forms)				
Non-isodiametric forms	4.20	26.74	58.7	39.18	51.97					
Cytoplasm										
Acidophilic	29.08	10.82	40.4	8.94	23.27				72.2	8.0
Basophilic	69.21	85.76	13.3	87.43	55.26				19.9	79.3
Indeterminate	1.66	3.42	46.3	3.63	21.47				7.9	12.7
Absent cytoplasm	0.04			1.78	3.38					
Vacuoles	13.74	26.60	2.8	10.35	7.32				34.5	29.6
Nuc. area (sq. micra)	36.51	167.20	138.4	109.38	77.04	76.7	87.4	64.6	89.2†	79.9†
Relative nuc. area in %	2.32	16.45	25.9	31.96	34.44	28.8	34.6	38.6		
Nuclear shape										
Round	75.66	59.16	7.9	43.94	34.36					
Oval	23.38	39.84	75.1	54.70	56.40				83.1	74.0
Flat	0.65	0.60		0.67	8.12				12.6	18.6
Irregular	0.30	0.40	17.0	0.69	1.12				4.3	7.4
Distribution										
Isolated		81.34	54.5	72.08	50.91					
Sheets		18.44	45.5	2.66	5.24					
Syncytial masses		0.22		25.26	43.85					
Multinucleation	0.17	4.98	1.4	1.40	1.22					
Chromatin										
Hyperchromatism	±	+	++	+++	+++					
Finely granular	27.21	94.40	93.8	21.98	30.78	22.1	20.3	12.6	76.4	82.9
Coarsely granular	3.92	4.00	0.6	71.57	47.38	58.9	76.4	79.5	23.6	17.1
Translucent-opaque	48.85	1.60	5.6	6.45	21.84	18.9	3.3	7.8		
Nucleoli	0.15		(rare)	4.77	15.66	5.0	23.7	19.9	18.4	15.8
Chromocenters	0.84		+	3.54	2.14				48.0	56.3
Cell No. & groupings										
Altered cells/slide (circa)		50-500		500-5000	50-5000				50+	50+
Syncytial masses		±		++	+++	13.5	23.1	12.3		
Sheets		+++		+	++					
Clusters									++++	++++

Using a systematic meander screening pattern the features of 100 cells were studied per case in normal, in situ cancer, and invasive cancer while 60 cells were studied in each dysplasia. The cited values represent (% of total). * Measurements were made by ocular micrometer. † Measurements were made by planimetry.

REFERENCES:

Reagan, J. W., and Hamonic, M. J.: Dysplasia of the uterine cervix. Proc. of the N. Y. Acad. of Sc. 63:1236-1244, 1956.

Reagan, J. W., and Hamonic, M. J.: The cellular pathology in carcinoma in situ. A cyto-histopathological correlation. Cancer 9: 385-402, 1956.

Reagan, J. W., Hamonic, M. J., and Wentz, W. B.: An analytical study of cells in cervical squamous cell cancer. Lab. Inv. 6: 241-250, 1957.

Patten, S. F., Reagan, J. W., and Obenauf, M.: An analytical approach to the diagnosis of endometrial adenocarcinoma in cytological material. Proc. Inter-Soc. Cytol. Council 7:153-156, 1959.

Patten, S. F., Reagan, J. W., Obenauf, M., and Ballard, L. S.: Post-irradiation dysplasia of uterine cervix and vagina: An analytical study of the cells. Cancer 16:173-182, 1964.

From the Institute of Pathology, Western Reserve University and University Hospitals of Cleveland, Ohio.

TABLE 4.—*Classification of Gynecological Cytology*

I. Physiological
 a. Cyclic; follicular, secretory, menstrual.
 b. Pre-pubertal; Post-Menopausal
 c. Pregnancy, Postpartum
II. Inflammatory
 a. Trichomonas
 b. Monilia
 c. Döderlein
III. Atypicality
 a. squamous cells
 b. endocervical cells
 c. endometrial cells
IV. Metaplasia
 a. immature
 b. mature
 c. atypicality
V. Dysplasia in squamous cells
 a. slight
 b. mature
 c. marked
VI. Dysplasia in metaplastic cells
 a. slight
 b. moderate
 c. marked
VII. Carcinoma in situ
 a. developmental
 b. mature (large cell vs. small cell)
VIII. Invasive squamous cell carcinoma
 a. keratinizing carcinoma
 b. large cell non-keratinizing carcinoma
 c. small cell non-keratinizing carcinoma
IX. Adenocarcinoma in situ
 a. endocervical
 b. endometrial
X. Adenocarcinoma
 a. endocervical
 b. endometrial
 c. mixed carcinoma
 d. adenocanthoma
 e. mesonephric carcinoma
XI. Metastatic carcinoma
 a. breast
 b. ovary
 c. bowel, etc.
XII. Radiation
 a. post-irradiation response
 b. post-irradiation dysplasia
 c. recurrent carcinoma

The Cleveland cytological material has been well documented by comparison with serial sections from cervical conizations and hysterectomies. When a statistically valid number of cases of one lesion had been accumulated, Reagan would begin the laborious task of classifying the lesion, using the cytological criteria shown in Tables 1 and 2. Several aspects of cellular morphology have to be considered: the counting of each altered cell on a slide, its measurements, its density, its chromatin pattern, etc. The correlation of these findings with the cellular changes found in other cervical lesions has greatly advanced the early detection of cancer and precancerous lesions in the female reproductive tract.

As can be seen in Table 3, there are several significant differences between the various lesions. These are, to the trained cytologist, valuable aids in the proper identification of a given lesion.

The system of classification of gynecologic exfoliative lesions developed by Dr. Reagan is useful as a frame of reference for his investigations. (Table 4). Although this classification may seem esoteric to the average clinician, its value is appreciated by the cytologist as an aid in prognosis.

Three subheads appear under "Invasive Squamous Cell Carcinoma." Dr. Reagan has demonstrated definite correlations with the five-year survival rates for each subtype of carcinoma, using the findings of the vaginal smear. Further, Reagan, in a recent study, classified endometrial adenocarcinomas according to the systems of Broders and Duke; this may prove a valuable aid in predicting the course of such lesions.

METAPLASIA CONSIDERED

The term, "metaplasia," denotes the substitution of one cell type for another. Robert Meyer pointed out, however, that this expression is essentially inaccurate because there is no transformation of one adult type of epithelium into another. Leopold Koss, a well-recognized cytologist, has made a plea to retain this term since its use is so widespread. "Metaplasia" in the present classification is considered one of the end results of reserve cell hyperplasia, also called prosoplasia, subcylindrical hyperplasia, basal cell anaplasia, and epidermidization. This benign process is seen above the squamocolumnar junction and begins under the cervical columnar epithelium. It has been postulated by some investigators that such "metaplastic" cells may eventually develop into carcinoma, noninvasive or invasive, though the process in its early stages appears to be benign.

Another division of this classification is "dysplasia," (see Table 5) regarded as entirely dif-

TABLE 5.—*Synonyms for Dysplasia.*

Atypia	Hoffman, Lapid & Goldberger
Atypical	Hinselman, Bechtold & Rawson
Increasing Atypical	Hinselman
Irregular Epithelium	Dellman & Wespi
Restless	Held
Unquiet	Berjardi
Anaplasia	Makay, Terjanian, Poschyachioda, Younge, Hertig, Takeuchi & Makay, Wespi
Precancerous Metaplasia	Carson & Gall: Przybara & Plutawa
Metaplasia with Atypicality	Howard, Erickson & Stoddard
Basal Cell Hyperplasia	Galvin, Telinde & Jones: Nesbitt
Hyperplasia	Galvin & Telinde, Gusburg, Novak & Galvin, Peckman & Greene
Hyperactivity	Galvin & Telinde: Guin
Atypical Hyperplasia	Makay, Reagan, Hicks & Scott
Dyskaryosis	Pund & Lacy
Leukohyperkeratosis	Schiller
Leukoparakeratosis	Schiller
Koilocytotic Atypia	Koss & Durfee
Borderline Lesions	Koss, Stewart, Foote, Jordan, Bader, & Day

ferent from carcinoma *in situ;* like carcinoma *in situ,* it will have to fight for its rightful place in the literature. Carcinoma *in situ* was previously known as incipient carcinoma, noninvasive carcinoma, preinvasive carcinoma, intraepithelial or intramucosal carcinoma, and Bowen's disease, before the medical world finally agreed on the single term which is now standard.

In regards to "dysplasia," there are at least 18 terms which stand for essentially the same lesion. The term "dysplasia" is rapidly becoming the most widely used term, and before long will probably replace the other terms.

IS DYSPLASIA PRECANCEROUS?

In 1956, it was thought that about 10 per cent of dysplasias eventually progressed to carcinoma, but Dr. Reagan now feels that only two or three per cent do so. Other authors seem convinced that this lesion is a separate entity, and not the precursor of a malignant lesion. The average age of patients with dysplasia is 34 years, whereas the average age of those with carcinoma *in situ* is 41 years. Dysplasia may occur simultaneously with carcinoma *in situ,* possibly indicating a common stimulus for both lesions.

Cytology has become an important diagnostic tool. Several studies show that approximately 90 per cent of female genital neoplasms can be detected by this means. In some centers this figure is high as 95 per cent, due to a greater encouragement of the clinicians to take adequate smears.

The cytologist should be able and willing to render more than a minimum interpretation of cellular alterations. To do this he needs to understand the nature and significance of these lesions. He should be ready to discuss the histopathologic methods to be used to verify the nature of the lesion. When a vaginal smear contains evidence of a malignant process, or when the cellular interpretation by the cytologist might be misconstrued, the cytologist should telephone the clinician and discuss the cellular findings. Thus, there should be less chance for misunderstanding and misinterpretation. The conscientious clinician appreciates a prompt verbal report and the opportunity to discuss the case in question with the cytologist. This communication may be advantageous for the cytologist, in that he might be able to interpret the cellular evidence with greater accuracy, once provided with pertinent clinical information. As the field of cytology becomes more sophisticated, and the natural history of the various lesions becomes clearer, more accurate prognosis is possible. The patient will ultimately benefit from the close communication between clinician, pathologist and cytologist. ■

305 Royal Hawaiian Ave.

REFERENCES

1. Papanicolaou, G. N., and Traut, H. F.: Diagnosis of uterine cancer by the vaginal smear, New York, The Commonwealth Fund, 1943.
2. Reagan, J. W., and Scott, R. B.: The detection of cancer of the uterine cervix by cytological study, Amer. J. Obstet. Gynec. 62:1347-1352 (Dec.) 1951.

A numerical tail is proposed, in order to somewhat stabilize a psychiatric kite.

A Numerical Index for Outpatient Schizophrenics: Its Relation to Stress Concepts

FREDERICK E. POPOFF, M.D.,* *Honolulu*

• *By assigning a small, arbitrary numerical value to each of three arbitrarily defined degrees of disturbance in each of five principal fields of mental activity—affect, delusions or hallucinations, motivation, ego functions, and socialization—it has been possible to bring a good deal of order to the evaluation of the severity, and degree of improvement, of schizophrenia.*

THIS PAPER is an attempt to demonstrate a quantitative method which makes it easier to follow the maintenance of homeostasis[1] (Cannon) in the outpatient schizophrenic.

The definition of schizophrenia we use is closely adapted from Federn[2]: Schizophrenia is (a deterioration of ego functions) due to a loss or serious diminution of ego cathexis, whether of supply or apportionment. Cathexis[3] is defined as the amount of psychic energy which is directed toward or attached to the mental representative of a person or thing. From our adapted definition of schizophrenia the following theoretical assumption, upon which the main body of this paper is based, is derived.

When a patient is discharged from hospital it appears that certain cathected and other non- or partially-cathected emotional constellations have reached a certain dynamic equilibrium[4] (Cannon) which allow the patient to function at some level in society. These constellations are: affect, ego functions, delusions-hallucinations, motivation, and socialization. Difficulties arise when the homeostasis of these five constellations becomes upset.

Eventually, the family, the patient, or the therapist feels a return to hospital is indicated because of the generally regressive nature of the patient's functioning. The numerical index described below is a scale by which the need for a return to hospital may be judged.

GENERAL ALARM REACTION

We know from Selye[5] that stress upsets homeostasis. According to Groen,[6] stress is defined as a change in the internal or external constellation of the individual, of such an intensity that the organism puts into effect a more-than-normal adaptive, defensive, or regulatory mechanism, in order to assure maintenance of homeostasis. This definition implies that the long-term schizophrenic patient may be looked upon as a psychophysiological organism which has already developed a pathological mode of adaptation-defense-regulation to

* Formerly Acting Chief of the Convalescent Center, State of Hawaii.
Received for publication April 26, 1965.

stress, differing from that of other organisms in a quantitative sense. It is here suggested that this quantitative difference is a loss of reaction to local stress by local alarm reaction. What does occur is an undifferentiated global reaction with general alarm,[7] to even local stress. This holds true whether the stress originates in the internal or external milieu of the psychophysiological organism.

The nature of this general alarm reaction was studied by the author at the Convalescent Center of the State of Hawaii. This facility is an outpatient psychiatric clinic serving patients discharged from the State Hospital. There are approximately 150 patients in the day hospital program at any one time. Observations of the day hospital patients by the entire professional staff revealed that, regardless of the stress involved, the five constellations (affect, ego-functions, delusions-hallucinations, motivation, and socialization) were consistently interrelated. This interrelation of constellations was originally referred to as the fivefold reaction pattern. A change in cathexis of one or more of these constellations as a result of stress occurs with a cathectic change in one or more of the other constellations. There is therefore no independence of these constellations. We could now redefine stress in the long-term schizophrenic as that which upsets homeostasis in the fivefold reaction pattern. When homeostasis no longer can be maintained in the fivefold reaction pattern, critical levels are reached, and improvement or regressions occur.

A CASE ILLUSTRATION

A 32-year-old Caucasian accountant had a 12-year history of schizophrenia, seven years being spent in the State Hospital. His last discharge was in May, 1964. At that time, his affect was well differentiated and he appeared motivated to return to accounting, though his ego functions were somewhat constricted. He was neither delusional nor hallucinative. Socially, he was interested only in the activities of his family, and had no known friends, activities, or hobbies. With the advent of the day hospital program he developed an interest in ceramics. Within a few weeks he was able to secure a part-time job as an accountant.

At this point, his previously well-differentiated affect was now considered by the staff to be bland. Nevertheless, he continued to work, and after some weeks he left the day program but was seen in regular weekly follow-up visits. During this period he joined a bowling league at work, but at the same time a progress note by his psychiatrist revealed that the patient was once again becoming delusional. It appeared that, in order to maintain motivation and socialization at functional levels, his affect and delusional-hallucinatory systems had undergone a shift in cathexis. Homeostasis was temporarily maintained by these cathectic shifts in the fivefold reaction pattern. (Keeping this in mind also helps to evaluate therapy, which proceeds from one general alarm reaction to the next at each therapeutic advance or failure.)

NUMERICAL SCORING

From cases such as the above it was decided to give a simple assessment of numerical values to each constellation. The clinical course of the illness could then more easily be followed by all concerned with the patient. A form was therefore devised to be utilized by psychiatrists, psychiatric social workers, psychiatric nurses, and to some extent by psychiatric aides. This form, called the Index, categorically delineates the clinical status of the patient by means of a point system. The maximum number of points scored is ten, the minimum is zero. No more than two points may be scored in any one category. When the patient is first seen at the Convalescent Center, in order to score the Index, the patient is interviewed by the psychiatrist with all of the staff members present. Following the interview, the patient's status is discussed by the staff and each of the five categories is scored by majority rule. Patients are formally re-indexed at three-month intervals, but informal evaluations are conducted daily by nurses, aides, and social workers.

The constellations are scored in the following way:

I. *Affect.*

If there is no evidence of facial mimicry or pantomimicry, either spontaneously or upon stimulation by verbal contact, and if this is accompanied by a staff consensus of "autistic" or "praecox"[8] feel, the affect is considered flat and no points are scored. Inappropriate affect is considered a form of facial mimicry and so is at a higher level of differentiation than flat affect. Even though it is pathological, a half point is usually assigned for inappropriate affect. Overt expressions of anger, anxiety, or guilt, however intense and severe, would be considered moderately differentiated and receive one point. Well differentiated affect is appropriate, spontaneous, and, in general, consistent. Two points are scored for well-differentiated affect.

II. *Delusions-hallucinations.*

Obvious delusions and hallucinations need little explanation and receive no points. However, many patients have borderline delusions or conceptualizations which are considered quite bizarre by many. In these cases a half point would be scored.

If the delusions can be "triggered" only upon specific stimulation and not generated spontaneously, they are considered segmented and receive one point. Quiescent delusions are those in which the staff feels that the delusion is being actively suppressed by the patient and one point is scored. Inactive delusions and hallucinations receive two points.

III. *Motivation.*

This is generally scored by:

(a) Patient's response to request to attend day hospital, to see the psychiatrists, and any spontaneous desire to do so, usually rate a half point.

(b) Any desire to work—in a sheltered workshop, or a strictly supervised or a competitive situation, rate a half point for sheltered and one point for competitive.

(c) Any future plans, including ideas on training or study, rate one point.

Most schizophrenic patients are in extreme conflict as regards the foregoing categories. Since the day care center contains a vocational rehabilitation project which is part of the day care program, it is possible quickly to assess whether the desire to work is anchored in reality and goal-oriented or not. Therefore, there is a constant referral of patients to our sheltered workshop on a trial basis.

If the staff feels there is no cathexis whatsoever to (a), (b), or (c), then no points are scored. If the feeling is general that the patient is in conflict, one point is scored. True goal-orientation receives two points. In the day-to-day Index evaluations by the staff, attendance and participation are valuable tools in scoring motivation.

IV. *Socialization.*

This is generally scored by:

(a) Day hospital relationships to staff and fellow patients. If the patient is spontaneous in these, a half point would be received.

(b) Relationships to family members or to coworkers: Are there family games in which patient is involved? Does he speak spontaneously to them or just upon stimulation by them? One point is received if patient is spontaneous. Otherwise, a half point is scored.

(c) Other relationships receive two points, especially if (a) and (b) are spontaneous.

If the staff feels there are no relationships whatever, then no points are scored.

V. *Ego functions.*

Here the functional aspects of the ego are assessed following the schema of David Beres.[9] Many of the functions overlap with one or more of the other constellations. For this reason, we feel it is impossible to score the functions separately and so they are scored on a more phenomenological basis. Beres' schema includes:

1. Relation to Reality, usually taken up under II–Delusions-hallucinations.

2. Regulation and Control of Instinctual Drives,discussed under the Ego functions heading on the form.

3. Object Relationships, usually discussed under IV–Socialization.

4. Thought Processes, for the most part considered under II—Delusions-hallucinations.

5. Defense Functions of the Ego, placed under Ego functions heading on the form, but very often discussed separately under III–Motivation and under I–Affect.

6. Autonomous Functions of the Ego, considered too complex a function to be placed on the form although certain aspects of this function are placed under other headings.

7. Synthetic function of the ego receives a great deal of attention in the scoring and is taken up almost exclusively under this heading because it always works with the other functions in an organizing and binding way.

The scoring of this constellation is carried out as follows:

(a) If the functions do not seem to have any regulation or control, either spontaneously or upon stimulation, they are said to be disintegrated and no points are received. Here, for example, the patient will make a similar response to all stimuli of whatever nature. If, however, the functions seem to work to a certain extent upon stimulation but are separated one from the other so that there is an obvious lack of cohesiveness beween the functions, they are said to be fragmented. Sometimes it is as if one function is being utilized to fulfill the role of another and then we speak of intra-ego ataxia. Fragmented functions receive a half point.

(b) If some functions work well and others partially or not at all, the functions are considered segmented and half to one point is scored. If all the functions work to a certain extent, but the sum total of functioning is self-limiting to certain areas, we speak of ego-constriction. One point is scored. Loose ego boundary means that the functions are generally intact but certain stimuli (stresses) cause one or more functions to temporarily take on a pathological nature. This is a reversible process and after a time, either spontaneously or in response to other stimuli, the ego boundary usually reverts to its previous state. Here, too, one point is scored.

(c) In some cases it will seem that the ego functions of a schizophrenic patient are grossly intact. Two points would then be scored. However, it must be remembered that this is done with the knowledge that the synthetic and autonomic functions are usually so affected by the original schizophrenic process that one might not be able to say these two functions were returned to the

INDEX FORM

Name: Date:

	(0—½)		(½—1)		(1-2)	
AFFECT 1. Mimicry and pantomimicry 2. "Autistic" or "praecox" feel 3. Stimulated or spontaneous (defenses)	Flat	()	Moderately differentiated	()	Well differentiated	()
DELUSIONS OR HALLUCINATIONS 1. Spontaneous 2. Borderline 3. On stimulation (relation to reality and thought processes)	Active	()	Quiescent or segmented	()	Inactive	()
MOTIVATION 1. Desire for treatment 2. Desire to work 3. Future plans (defense functions and relation to reality)	None	()	Conflictual	()	Goal oriented	()
EGO FUNCTIONS 1. Relation to reality 2. Regulation and control of instinctual drives 3. Object relations 4. Thought processes 5. Defenses 6. Synthetic function	Disintegrated or fragmented	()	Segmented or constricted or loose ego boundary	()	Intact	()
SOCIALIZATION 1. Day hospital 2. Home and/or work 3. Other (object relations)	No friends No activities	()	Some friends and/or some activities	()	Active social life	()
						GRAND TOTAL
TOTALS	(a)		(b)		(c)	

same level of functioning which they had prior to the onset of the schizophrenic process. Nevertheless, the degree of functioning may from a social point of view be considered intact.

CASE EXAMPLES

Two case examples follow:

(1) A 40-year-old Japanese man with a history of five State Hospital admissions totaling twelve years was originally indexed as follows: affect was moderately differentiated (1 point); inactive delusions (2 points); conflicting motivation (1 point); ego functions were constricted (1 point); and socialization was active (2 points). This makes seven points. After some time, job placement was made and an almost immediate rearrangement of his index occurred. Previously inactive delusions became segmented (1 point) but he was now considered goal oriented so his total points remained seven. Homeostasis was therefore maintained.

At this juncture the patient's father asked when he intended "to support himself completely." This external unforeseen stress set up a general alarm reaction as follows: Patient partially withdrew from his active social life and his affect became flat. This left the index of patient with a value of five points. As will be seen (*vide infra*) this is a critical value. For these reasons a family conference was held. It was decided to return the patient to the day program and relinquish the job temporarily. Had this step not been taken, we feel that a further deterioration of ego functions and/or a full activation of his delusionary-hallucinatory system might follow. In such an event the index would be four or less points which, in general, is not consistent with social functioning in competitive employment. More important, however, is that there could be no chance for a regain of homeostasis and an unalterable decline in the patient would occur.

(2) A Filipino plantation worker, approximately 55 years of age, had a lifelong history of schizophrenia with numerous returns to the State Hospital. Now once again a return to the hospital was requested by the employer. On evaluation he

was actively delusional (no points), ego functions were fragmented (half point), affect was inappropriate (half point), but as was often the case, he had many friends who were deeply concerned and his social life was active in the Filipino community (2 points). Also, he wished very much to return to work on the plantation (2 points). Since this total was five points as caught by the index, a hospital return was found to be unnecessary. Follow-up at three-month intervals was maintained, and one year later patient was still working.

USE OF INDEX

Results from the use of the index:

(1) The mean score of 200 patients seen just subsequent to their discharge from the State Hospital at their initial evaluations was five points (76 patients). We utilize this critical value in two ways. First, as a help in delineating and following the progress of the patient. Second, as a determinant of real importance on requests for returns to hospital.

(2) The Index can be an added tool for adjunctive psychiatric personnel. Such decisions as when to recommend release from a day hospital, or to assign a patient to a sheltered workshop, or to recommend competitive employment, are helped by utilizing the Index. The communication between the psychiatrist and the other members of the psychiatric team is facilitated by the index concept.

SUMMARY

A quantitative method for the evaluation of outpatient schizophrenics is presented. It is shown how this method is derived and some relationship to stress concepts is emphasized. Although the concept of cathectic shifts in the personality constellations presented raise many questions, no attempt is made to rigorously examine or comment upon them as this is felt to be beyond the scope of the paper. ■

1531 So. Beretania St.

REFERENCES

1. Cannon, W. B.: Bodily changes in pain, hunger, fear and rage, New York: D. Appleton Co., 1929.
2. Federn, Paul: Ego psychology and the psychoses, New York: Basic Books, 1952.
3. Brenner, Charles: An elementary textbook of psychoanalysis, International Universities Press, Inc., 1955.
4. Cannon, W. B.: The wisdom of the body, New York: W. W. Norton and Co., 1933.
5. Selye, Hans: The physiology and pathology of exposure to stress, Acta Inc., Medical Publishers, Montreal, Canada, 1950.
6. Groen, J., van der Horst, L., and Bastiaans, J.: Grodslagen der klinische psychosonatick, Haarlem: 1951.
7. Selye, Hans: Stress of life, New York: McGraw Hill, 1956.
8. Rumke, H. C.: Psychiatrie deel i Amsterdam: Scheltema and Holkema, 1955.
9. Beres, David: Psychoanalytic study of the child, Vol. XI. Ego deviation and the concept of schizophrenia, New York: International Universities Press, Inc., 1956.

Special Report

A hematological first: Xg^a antibody in a woman.

The First Auto-Anti-Xg^a Antibody in a Female

MITSUO YOKOYAMA, M.D.,* DAVID T. EITH, M.D.,† and MAX BOWMAN, MT(ASCP),† *Honolulu*

THE SEX-LINKED Xg^a antigen, controlled by a gene on the X chromosome, was first described by Mann *et al.*[1] in 1962, in a Caucasian man suffering from familial telangiectasia. The patient required multiple transfusion because of frequent epistaxes, and the antibody specific for the Xg^a antigen was discovered in his serum during donor-compatibility testing.

We have recently encountered a similar occurrence in a 33-year-old woman of Portuguese–Puerto Rican extraction, gravida 6, para 4, in the fifth month of pregnancy. She was admitted to the St. Francis Hospital for blood transfusions because of severe anemia (hemoglobin 3.5 gm). Cross-matching was performed by the saline, albumin, and indirect Coombs methods. The latter method revealed a weakly positive agglutination of several donors' red blood cells by the patient's serum and a strong positive in about half of the donors. The strong antibody was identified as anti-S, present in a titer of 1:32, by the use of Tencell‡ and Identigen§. The indirect Coombs reaction, enhanced by a potent antiglobulin serum, particularly the anti-γG serum prepared in our laboratory, identified the weak antibody as anti-Xg^a. Some of the commercially prepared antiglobulin sera showed only very weak reactions, while others showed no reaction at all. However, when either human or guinea pig serum complement was added to the serum and red-cell mixtures, a strongly positive reaction was observed with most of the antiglobulin sera. A nonspecific cold agglutinin was also found when the patient's serum and saline-suspended red cells were incubated at 5° C.

Direct Coombs test of the patient's red cells gave strongly positive reactions with all antiglobulin sera used in this study. Elution of the antibody was effected by Landsteiner and Miller's heat method[2] and by Weiner's alcohol precipitation method.[3] Although the eluate obtained by the heat method was weaker in reactivity than that obtained by alcohol precipitation, the antibody in both was found to be specific for the Xg^a antigen.

Following elution of the autoantibody, the patient's red cells were typed with various blood grouping sera and were shown to be A_1B, MMss, P_1, R_1r, Lu(a-), Le(a+b-), K-k+, Jk(a+), Fy(a-), and Xg(a+). Her husband's red cells were typed as O, MNSs, P_1, R_1r, Lu(a-), Le (a+b-), K-k+, Jk(a-), Fy(a-) and Xg(a-).

The present studies were confirmed by J. Gavin and R. Sanger of the Lister Institute in London. They detected a very weak anti-Xg^a antibody in the patient's serum in ten of 11 samples of Xg(a+) cells and in one of six samples of Xg(a-) cells. They also demonstrated the presence of the anti-S but did not get a definitely positive agglutination of the Xg^a antigen with an eluate prepared by the heat method.

This patient represents a case of hemolytic anemia due to an autoimmune antibody produced against her own red cells. The antibody, demonstrated in her serum and red cell eluates, was found to be anti-Xg^a. This is the first case of auto-anti-Xg^a antibody in a woman.

ACKNOWLEDGMENT

This work was supported by the Memorial Fund for Mrs. Lois A. Mayers. ■

REFERENCES

1. Mann, J. D., Cahan, A., Gelb, A. G., Fisher, N., Harper, J., Tippett, R., Sanger, R., and Race, R. R.: A sex-linked blood group, Lancet 1:8-10 (Jan.) 1962.
2. Landsteiner, K., and Miller, C. P.: Serological studies on the blood of the primates. II. The blood groups in anthropoid apes, J. Exp. Med. 42:853-862 (Dec.) 1925.
3. Weiner, W.: Eluting red cell antibodies. A method and its application: Brit. J. Haemat. 3:276-283 (July) 1957.

* Director of Research, The Kuakini Research Foundation.
† St. Francis Hospital.
‡ Tencell obtained from Spectra Biologicals, Inc., East Brunswick, New Jersey.
§ Identigen obtained from Ortho Pharmaceutical Corp., Raritan, New Jersey.



The President's Page



Previous communications have dealt mostly with Medicare legislation. I believe it is timely to touch briefly on one more piece of legislation which will most assuredly burrow deep into the private practice of medicine.

Most, if not all, members of the Hawaii Medical Association are probably cognizant of PL 89-239—the Heart, Cancer, and Stroke legislation passed by the "Great Society," health-conscious 89th Congress. It was the intent of the so-called liberal faction to provide an avenue of entrance to extensive "free" health services for the entire nation, because the original bill stipulated Heart, Cancer, Stroke, and *Other Diseases*. The intent was to create regional health centers where any individual could freely apply for care for *any* disease *without* referral and without charge. The cost was to be entirely borne by the Federal Government. Obviously this was the open door to total socialization of the medical profession.

Combining PL 89-239 (Heart, Cancer, Stroke) with Medicare Titles XVIII (Part A—Limited Hospital Care for aged regardless of need and Part B—Voluntary Supplementary Medical Care) and XIX would incorporate a great percentage of our population into a program of "free" and "partly free" health coverage. (Title XIX includes all the original old medical assistance package for the needy, such as the following: Title I—Old Age Assistance and Medical Assistance for the Aged; Title IV—aid and services to needy families with children; Title X—aid to the blind; Title XIV—aid to the permanently and totally disabled; and the consolidated program Title XVI which a state may use to replace Titles I, X, and XIV.) A new portion or section of Title V was created which deals with "Grants for Comprehensive Health Services for Children and Youth." There is also a health program under the EOA (Economic Opportunity Act). In reviewing all these programs one is startled by and alarmed at the role of the Federal Government in health care.

Returning to PL 89-239 (Heart, Cancer, Stroke) the AMA was able to influence the elimination of certain objectionable features of the law, and succeeded in changing the phrase "other diseases" to "related diseases." They were also able to insert a provision that a patient to be treated in such centers or regional complexes *must be referred* to that place by his physician, and that such centers would not alter the present program of medical practice. This required intensive effort by the AMA, and our parent organization is to be congratulated on this accomplishment.

The Hawaii Medical Association through combined action with the Department of Health and the University of Hawaii has assisted the Governor in the selection of an advisory committee to study and apply for establishment of a Regional Complex Center grant for Hawaii including certain areas of the Pacific Ocean. This committee of twelve has nine physician members who are active members of the Hawaii Medical Association.

It is important that physicians constitute the majority of any committee that deals with health care, and efforts to that end have so far been successful, through the cooperation of our State government, the University of Hawaii, the Department of Health, and the Hawaii Medical Association.

Whether a Regional Center will be established here is unknown at this time. If one is established, further efforts will be required to secure grants for specific research or work in the fields of heart disease, cancer, or stroke.

Should any member of the Association wish to follow the activities of this committee they may do so by inquiring at the executive offices of the Hawaii Medical Association.

Ord Pinkerton

HAWAII MEDICAL JOURNAL

Editorials

HMSA and the Court of Public Opinion

A long editorial in the *Honolulu Star-Bulletin* for last February 12 ended with these paragraphs:

> To us, there is nothing repugnant in the idea of the doctors choosing any bargaining agent they want. There certainly is plenty of community precedent for this.
>
> Bargaining demands will be only that. The H.M.S.A. board doesn't have to grant them.
>
> Should it come to that, either side could resort to the court of public opinion for support.
>
> Such opinion would hardly fall in line with either excessive demands from the doctors or excessive rigidity by the H.M.S.A.

We heartily agree with this conclusion, but wonder that it was reached, in view of the statements in the body of the editorial. Although the writer referred to "some doctor sources," no attempt to verify the statements was made through any official sources known to the Hawaii Medical Association.

The editorial stated that "the dispute has developed some bitterness on both sides. H.M.S.A. people see the doctors as trying to dictate fees." Possibly "bitterness" describes the feeling of the HMSA; the reaction of most doctors is more one of disillusionment. Few of them had realized that their obvious right to place a value on their own services, by setting fees for them, would ever be described as "dictating" fees.

The editorial stated that "The doctors don't want a layman-dominated board setting their fees even though H.M.S.A.'s committee on fees is made up of doctors." Surely it is not unreasonable for the doctors to insist that the fees paid them for their services be fees of which they approve. But actual fees have never been the subject of discussion at any time during the years of negotiations.

"Some doctor sources," said the editorial, suggest that a "five-year fee agreement" might be reached now by collective bargaining. No mention of this has been made as yet by either party to the argument, so far as we know.

The editorial says that "H.M.S.A. proposed a compromise suggested by John Castellucci, Executive Vice-President of the National Association of Blue Shield Plans:" a prevailing-fee program. Actually, since fees have not been and are not the basis of the difference, Mr. Castellucci's suggestion hardly qualifies as a "compromise."

Says the editorial: "150 doctors of an original 450 have kept their original contracts as 'participating physicians' alive. . . ." We wonder. There were 504 participating physicians on the last HMSA roster published, dated September, 1964, and 54 were added a year later. Since most of the 54 were in Honolulu, we may fairly assume that the 450 referred to were Honolulu physicians. Of these, all but 23 (four of whom are retired) cancelled their contracts while names were still available to us through the Medical Committee of HMSA. Under newly adopted ground rules applications for renewal of participation are now seen only by Mr. Veltmann.

A poll of physicians conducted by HMA last month identified only 37 participating physicians: 17 in Honolulu, 20 on neighbor islands. If this estimate is too low, we invite HMSA to publish an up-to-date roster. Surely there is no reason for them to conceal from their subscribers the names of their participating physicians?

In summary, we don't believe HMSA's position is either sound or secure, and we doubt that they clearly perceive ours. Ours was well summarized recently by an open letter from Dr. J. I. F. Reppun to Mr. Veltmann, as follows:

". . . . we do not want to run HMSA. What we do want is:

(1) Prior advice and consent in matters involving our services to subscribers.
(2) Recognition of our medical societies as our bargaining agents.
(3) Individual contracts with stipulated termination date."

If this be treason, make the most of it!

The A.M.A. Fights Quackery*

"Physicians, as conservators of the public health, are bound to bear emphatic testimony against quackery in all its forms."

This is a quote from proceedings of the American Medical Association's Clinical Convention in Philadelphia in December. December, 1847!

So you see, from its very inception, 118 years ago, the American Medical Association has been battling quackery. It is dedicated to a continuation of this warfare against wasting the nation's health and its health care dollar—of fighting fraud at the bedside of ill and desperate people.

For, as long as there are human beings, there will be human nature—and quacks, pretenders to ability they don't possess, to take advantage of the fact.

The health quack is not so easy to spot these days. The stovepipe hat and the pitchman's hawking have gone. In their place are their space-age counterparts, the suave, apparently sophisticated super salesmen with the Madison Avenue manners.

These merchants of menace, more insidious and unscrupulous than ever, have many new products, worthless diet fads, worthless food supplements, worthless cosmetic devices and treatments, worthless "cures" for everything—even for brain-damaged children and other mental illness.

They bilk the undiscerning—the uninformed, the desperate, the unsuspecting of all ages—of millions of dollars a year. The estimates of the costs of medical quackery are at best calculated guesses, but they have gone as high as a billion dollars a year. And one authority in the field of quack-fighting has stated that "medical quackery each year costs more lives than all crimes in the United States."

It is this cost of life—and health—that has placed America's physicians in the front lines of the war on quacks. It is the insidious side effect of quackery with which medicine concerns itself: the delay in proper medical care that may cost life itself.

It is for this reason, too, that the medical profession is dedicated to education of the people about cultism—chiropractic and the other health sects that turn their backs on scientific medicine.

The House of Delegates of the American Medical Association said in 1933:

> Either the theories and practices of scientific medicine are right and those of the cultists are wrong, or the theories and practices of the cultists are right and those of scientific medicine are wrong.

And in 1961, it said:

> There can never be a majority party and a minority party in any science. . . .

After the quack or the cultist has extracted his pound of flesh—after the damage is done and after the sick may have become the dying because of the delay in proper care—scientific medicine usually is called upon to pick up the pieces.

Medicine has tried and will continue to try to do that job, too, but how much easier the job would have been—how many lives would have been saved—if. . . .

* Editorial furnished by AMA headquarters.

Smallpox Vaccination, 1966

Revaccination is undoubtedly sufficiently neglected, in the U.S.A., to justify C. Henry Kempe's assertion that our population is well vaccinated but not well immunized—and that our freedom from smallpox (since 1949) is a result not of widespread immunity but of good luck. Unquestionably we are, as he freely admits,[1] in danger of the introduction of smallpox from any of the underdeveloped nations in which it is still prevalent. This danger will be present, he suggests, for perhaps another twenty years. But if we're going to keep ourselves safe, we had better promote and perform revaccination every five years or so.

Contraindications to vaccination, says Kempe, are failure to thrive, dysgammaglobulinemia, blood dyscrasias, eczema, or immunosuppressant therapy, or children who have been exposed to infectious diseases recently or who have siblings with eczema.

Three pressures with the vaccinating needle against the unprepared skin of the upper arm, at the age of one or two years, are the recommended procedure for primary vaccination, according to Kempe. More pressures merely increase, unprofitably, the severity of the "take."

Should vaccinia gangrenosa occur, vaccinia immune globulin (from the Red Cross) and methisazone, 200 mg/kg orally, followed by 50 mg/kg every six hours for three days, followed by three days' rest and repetition of the course, are indicated.

So Dr. Kempe doesn't feel the time is yet ripe to throw out vaccination against smallpox; he just feels that there are other protective factors at work, and that we're not making the best use of this one.

[1] Kempe C. H., and Benenson, A. S.: Smallpox immunization in the United States, J.A.M.A. 194:141 (Oct. 11) 1965.

Hawaii Academy of General Practice

WE MAKE LIFE HARD FOR OURSELVES!

Whether it be in office, hospital, or medical society, regulation and regimentation hold sway.

I have an uncle past 90 who still practices medicine in a crossroads village. His office is in his house. At a ring of the office doorbell, day or night, he rises slowly and noisily, taking his time to answer and admit the patient, examine, and prescribe. Bookkeeping? A monthly statement? Never heard of such things in 60 years of general practice. Charges? Oh, anything will do, this time or next time. The few dollar bills passed over to him in gratitude, he lays on a small pile on a shelf over the wash basin before washing his hands.

What a far cry from modern-day IBM equipment, or a Remington-Rand machine, data processing, and instant billing. There is less of gratitude in with the payment—which, however, is still most often "next time" in coming.

Whether it be the government tax men or the insurance adjustors who look over our shoulders, our office procedures are scrutinized, regulated, and standardized. The forms must be completely filled out. "Was the urine specimen obtained in your presence?" is a question that must be answered in all seriousness.

"RVS" fee schedules, the "going rates," "average" fees, and the latest "prevailing fees," hem us in. No one rises to protest that schedules of average fees could lead to a world of "average" doctors. To be "participating" may, in fact, lead to mediocrity. We are drifting away from the concept of building a better mousetrap, and although "standards" may be kept, the lowest common denominator will be mediocrity, not excellence.

The advent of MEDICARE, to be implemented by us physicians according to promulgated standards, watched over by Utilization Committees, will explode in our midst a Big Brother complex that will surpass any previous experience. If we have resented in the past having to conform to rules put forth by HMSA, or by Workmen's Comp., or by D.S.S., we will be driven to madness by what is to come in the way of regulation and mandate. If some of us have not liked even the concept of Foundation Plans, in which regulation is by our own colleagues, how can we walk blithely into the vast spiderweb of government red tape that hides behind the front of the Utilization Committees? Surely we are deluded or naive to believe that by "managing," we can lead; does the ant, riding on the front of a steam roller, think he is guiding its course?

There was a freedom to the practice of medicine in the old days that has gone out with the horse and buggy. Can it be recaptured? Yes, it can. The British are closer to the goal than we are, because they have gone through the phase into which we in America are just entering. In England, the people are swinging away from the use of the Health Plan and are seeking care from private physicians. In our country, where the standard of living is so much higher, the physicians might respond earlier to a like demand for private services. The number of Non-Participating — not participating in any plan, HMSA, Foundation, or MEDICARE — might grow rapidly. The pendulum may swing away from regimentation, averages, and mediocrity, over towards excellence and top-excellence. The physician whose knowledge, experience, independence, and dedication in personal service to his patient, to the complete exclusion of third parties, lay, professional, or governmental, may well reach heights in which his services will be worth what they used to be. Demand will create the supply, and damn the "prevailing" fees!

J. I. FREDERICK REPPUN, M.D.
Secretary

HAWAII MEDICAL JOURNAL

In Memoriam – Doctors of Hawaii

This is the sixtieth installment of In Memoriam —Doctors of Hawaii.

O. Lee Schattenburg

Otto Lee Schattenburg was born in Clearfield, Kansas, on September 6, 1894, the son of George and Rosa (Schendel) Schattenburg. His father came from Germany in Kansas. Later he in 1882 and settled moved his family to California, where he was a carpenter.



DR. SCHATTENBURG

Dr. Schattenburg graduated from Turlock High School in Turlock, California, and received his B.A. from the University of California in 1921 and his M.D. from the same institution in 1925. In the following year he was resident physician and surgeon at Mt. Zion Hospital in San Francisco.

While deciding on a location for the practice of medicine, Dr. Schattenburg joined the yacht "Kaimiloa" for a six-month South Seas cruise as ship's surgeon. During his short stay in Honolulu, he fell in love with the Islands and applied for a residency at The Queen's Hospital. This was granted in May, 1926, and for a year and a half he served as house surgeon. Following this he became associated with The (now Straub) Clinic as assisting physician in gynecology and obstetrics.

In 1929 Dr. Schattenburg established his own obstetrical and gynecological practice in Honolulu. That same year on November 13 he was married to Myrtle Lennea Johnson at Kuliouou, Oahu. They had three children: Ellen Ruth (Mrs. Boyd T. Townsley), Marion Lee (Mrs. Peter U. Pickens), and George Carl.

He was on the staff at Kapiolani, St. Francis, Queen's, Territorial, Kalihi Receiving, and Leahi hospitals. From the beginning of his private practice to the close of his life Dr. Schattenburg was a consultant to the Salvation Army Women's Home. He always said it was one of his most gratifying experiences.

An active participant in matters relating to public welfare, Dr. Schattenburg was named assistant to the president and executive officer to the Board of Health in 1932 and for several years was consultant in obstetrics at Palama Settlement. Appointed director of maternal welfare of the Board of Health in 1939, he served in that capacity until his death. He also taught obstetrics to many classes of student nurses at Queen's and St. Francis hospitals and to public health nurses at the University of Hawaii.

During the first World War he served with the U. S. Navy Medical Corps in a noncommissioned capacity, being detailed for a year as an instructor at Hampton Roads, Virginia, and thereafter served on board transports to Europe. Later he was a 1st lieutenant in the U. S. Army Medical Reserve Corps.

He was a member of the American Medical Association, Hawaii Medical Association, and Honolulu County Medical Society, serving as Vice-President in 1935 and President in 1936. He was also a former Vice-President and Health Chairman of the Territorial Parent-Teacher Association (1940-1942). His club memberships included Phi Chi, Tau Kappa Epsilon, Tau Beta, the Oahu Country Club, and the University Club.

On December 8, 1941, Dr. Schattenburg was scheduled to take Part I, the written portion, of the American Board examination in obstetrics and gynecology. Due to the attack on Pearl Harbor the day before, this was, of course, impossible. Several weeks later a letter came from the Credentials Committee of the Board saying they had given courtesy approval of Part I. He was unable to present himself on the mainland for Part II before his death.

Golfing and painting in oils were his chief recreations. Several of his paintings have been exhibited at the Honolulu Academy of Arts.

Dr. Schattenburg died in Honolulu on July 10, 1943, at the age of 48.

Katsutaro Arai

Dr. Katsutaro Arai was born in Saitama Prefecture, Japan. In 1921 he came to Hawaii as an intern to the Japanese Hospital in Honolulu. He practiced medicine for a brief period of seven months. No more is known of him.

Book Reviews

Trauma to the Liver, Vol. III

By Gordon F. Madding, M.D., M.S. (Surgery), F.A.C.S., and Paul A. Kennedy, M.D., F.A.C.S., 134 pp., $6.00, W. B. Saunders Company, 1965.

MAJOR PROBLEMS IN CLINICAL SURGERY is an expanded discussion of a limited subject. As such, it is comprehensive and deals adequately with this difficult problem in surgery.

The chapter on anatomy is standard but the next two chapters, on history and on classification, are relatively sketchy. The section on "Operative Approach and Surgical Procedures" is the most rewarding for the surgeon.

It is a readable book but falls far below the style and promise set forth in the first volume of this series, "Liver and Portal Hypertension," by Charles Child III. One cannot help but feel that "Trauma to the Liver" is a disappointment, both because of itself and by comparison to the first volume. It is certainly too expensive.

WALTER CHANG, M.D.

★Management of the Patient with Subnormal Vision

By Gerald Fonda, M.D., F.A.C.S., 161 pp., $11.00, C. V. Mosby Company, 1965.

THIS SHORT VOLUME reviews in an orderly fashion the types of cases needing visual aid. It correlates the outstanding contributions of two great teachers and leaders in the field of physiological optics, Dr. James E. Lebensohn and Dr. Alfred Kestenbaum. It should be of value to opticians who work closely with ophthalmologists.

The illustrations, diagrams, and text are easily followed, and I feel that this text should be on the library shelf of every ophthalmologist.

PHILIP M. CORBOY, M.D.

Pulmonary Embolic Disease (Proceedings of the Symposium)

Edited by Arthur A. Sasahara, M.D., and Myron Stein, M.D., 312 pp., $14.50, Grune & Stratton, 1965.

THIS BOOK is a compilation of the papers presented at the Boston Symposium on pulmonary embolic disease in May, 1964. Many prominent authorities in specialty of thromboembolism have presented discussion of their concepts of this very complicated problem. Both basic science investigators as well as clinicians have presented their views on the problem of pulmonary embolic disease. The text is separated into basic science mechanisms first, followed by clinical discussions on diagnosis, prognosis, and therapy. Dicussion on the coagulation mechanism is especially good. These proceedings bring to the physician an up-to-date evaluation of the entire problem of pulmonary embolic disease and should interest physicians especially interested in coagulation, thromboembolism, and cardiopulmonary diseases. This book is recommended as a most recent collection of papers on the difficult and complex subject of pulmonary embolic disease.

ROBERT T. S. JIM, M.D.

Practice of Hypnosis in Anesthesiology

By Carl A. Coppolino, M.D., with a foreword by George Wallace, M.D., 204 pp., $6.50, Grune & Stratton, 1965.

THE TITLE of this book suggests a most welcome text. With the reawakening of interest in hypnosis as a tool in the practice of medicine, it has been recognized that each physician should practice hypnosis only within his particular field of competence. Unfortunately, this book tells little of the practice of hypnosis in anesthesiology.

The first half of the book is worth reading by anyone interested in hypnosis, as it contains a very fine history of its practice and early practitioners, and a reasonable summary of assorted facts concerning mechanisms and characteristics of hypnosis and general working techniques. The latter half of the book, wherein the specialist's utilization should have been clearly documented, degenerates into an incredible conglomeration of misinformation, haphazard quotations, directly conflicting statements, non sequiturs, obscure phrasing, and poor organization. Much valuable material is thus lost to the reader.

A list of three hundred and four references is offered, of which only one quarter pertain to hypnosis in anesthesiology. No reference is made to the recent journal publications of a number of surgeons and anesthesiologists who have made valuable contributions to an important phase of clinical practice.

CARL E. JOHNSEN, JR., M.D.

★Amebiasis: A Biomedical Problem

By James G. Shaffer, D.Sc., William H. Shlaes, M.D., and Ryle A. Radke, M.D., 192 pp., $8.50, Charles C. Thomas, 1965.

THIS COMPREHENSIVE, up-to-date summary of the authors' experiences constitutes the first full treatise on the subject since 1953.

As a guide for clinicians, the authors stress liver (extraintestinal) involvement, the role of associated organisms, proctoscopic differential diagnosis, and the importance of laboratory follow-up examinations after specific therapy. The clinical aspects receive full emphasis and are covered in a very readable manner.

HAMILTON H. ANDERSON, M.D.

★Atlas of Cataract Surgery

By John M. McLean, M.D., F.A.C.S., 130 pp., $20.00, The C. V. Mosby Company, 1965.

DR. JOHN MCLEAN has put into published and illustrated form one of the finest and most comprehensive atlases on cataract surgery and its management that I have seen. He has intentionally eliminated the names of ophthalmic surgeons and their instruments illustrated so as to keep favoritism out of his presentation.

The large number of illustrations undoubtedly accounts for the price of this volume, but they are outstanding, easy to follow, and each is accompanied by a diagrammatic cross-sectional drawing. The treatise is thoroughly up-dated, even cryo-surgical methods being described. This publication deserves a place *on the desk* of every ophthalmologist, as an excellent short text to review just

continued page 354

★ means highly recommended.

This Is What's New!

• Biochemical studies on two patients with scleredema revealed a 50 per cent reduction of collagen content, indicating that **sclerosis** is not a feature of **scleredema.** Mucopolysaccharides were increased, indicating that scleredema is most likely a mucopolysaccharidosis. (*Arch. Derm.* [Dec.] 1965).

• Trial of the periwinkle alkaloid vinblastine in the treatment of patients with various neoplastic diseases resulted in tumor regression in patients with **Hodgkin's, lymphosarcoma,** and **carcinoma of the breast.** Most of the patients with Hodgkin's disease will respond to vinblastine. This group also included patients with Hodgkin's who were refractory to conventional treatment. (*Arch. Int. Med.* [Dec.] 1965).

• Of 25 Swedish patients with **necrotizing vasculitis,** approximately half were receiving **thiazides.** All were **elderly.** One patient had a severe exacerbation after thiazide was re-administered. **Renal changes** occurred in approximately half of the patients. (*Lancet* [Nov. 13] 1965).

• In Denver, physicians proved better than their tape recording of heart sounds in the **detection of heart disease** amongst school children. Of known cases of heart disease, 87 per cent were detected by physicians' examination, 45 per cent by tape recorded heart sounds, and 41 per cent by electrocardiogram. Seven per cent were missed by all three methods. (*Amer. J. Card.* [Nov.] 1965).

• Four hundred **echoencephalographs** performed after **head injury** revealed the need for **surgical treatment** in 20 patients. There were **no false-positive** echoencephalograms. (*Wien. Med. Wschr.* [Oct. 16] 1965).

• Jaundice in infants and rats can be effectively alleviated by exposure to an **artificial blue light.** Eleven jaundiced infants treated with the blue light had an average fall of 2.9 mg bilirubin per 100 ml during the course of treatment. This was significantly greater than a change in an untreated group of jaundiced infants. Similar results were obtained in jaundiced rats. This **photodecomposition of bilirubin** reduces the level of serum bilirubin. No evidence of toxicity was noted from the decomposed bilirubin. (*Arch. Dis. Child.* [Dec.] 1965).

• Comparison of a **self-rating depression scale** used in an outpatient clinic with the clinical diagnosis and MMPI (Minnesota Multiphasic Personality Inventory) suggests that it may be a more sensitive measure of depression than the MMPI, particularly in differentiating **depression** from **anxiety reaction.** (*Arch. Gen. Psychiat.* [Dec.] 1965).

• The potent diuretic **ethacrynic** is effective in diuresing **cirrhotic patients** who are **refractory to other diuretics.** Side effects of hypokalemia and alkalosis can be lessened by administering the ethacrynic acid intermittently in conjunction with potassium chloride, lysine monohydrochloride, and spironolactone. No serious side effects were noted in 23 cirrhotics so treated. (*Gastroenterol.* 1965).

• Eight cirrhotic patients with disabling **portal-systemic (hepatic) encephalopathy** were treated by **colectomy.** Four died shortly after surgery, three from liver failure and one from peritonitis. The four surviving patients improved considerably, with improvement being maintained for over one year. No episodes of coma occurred in the surviving patients after surgery and all tolerated a normal intake of protein. Ammonia levels fell, but subsequently rose to moderately high levels. Electroencephalographic abnormalities improved, but did not return to normal. (*Lancet* [Oct. 30] 1965).

• In Portland, Oregon, **palmar keratoses** somewhat resembling the keratoses due to arsenic were observed in 46 per cent of men and 26 per cent of women with **cancer,** and in 12 per cent of men and 5 per cent of the women without cancer. A search for cancer would appear indicated in all patients with palmar keratoses. (*Arch. Derm.* [Nov.] 1965).

• Of 12 patients with **dissecting aneurysm** of the aorta, the six who were treated surgically all died within five days. Six treated medically, with **trimethaphan, reserpine,** and **guanethidine, all survived.** The Florida physicians felt that the cardiac impulse was the most important force in furthering the dissection and that it was reduced by the medication. (*J. Thor. Cardiov. Surg.* [Sept.] 1965).

F. I. Gilbert, Jr., M.D.

HAWAII MEDICAL JOURNAL

New Members



Edward K. Kagihara, Jr., M.D.
407 Uluniu Street
Kailua, Hawaii 96734
PEDIATRICS
University of Iowa—1959
Internship—Virginia Mason Hospital—1959-1960
Residency—University of Washington—1960-1962



Charles W. Stewart, Jr., M.D.
Mental Health Clinic
Wailuku, Maui 96793
PSYCHIATRY
University of Maryland—1945
Internship—Maryland General Hospital—1945-46
Residency—Maryland General Hospital—1946-47 (Medical)
Psychiatric Institute, University of Maryland—1960-63 (Psychiatric)



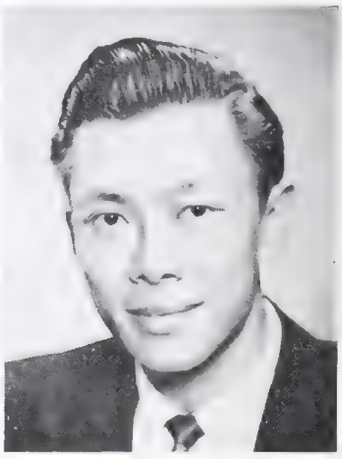
Joseph C. Hathaway, M.D.
Hale Mohalu Hospital
Pearl City, Hawaii 96782
DERMATOLOGY
University of Minnesota—1925
Internship—Minneapolis General Hospital—1925-26
Residency—P. G. Vienna, Paris, London—1926-1927



Clifford B. G. Chang, M.D.
1481 South King Street, Suite 339
Honolulu, Hawaii 96814
GENERAL SURGERY
Creighton University School of Medicine—1957
Internship—King's County Hospital, Brooklyn—1958
University of Pennsylvania Graduate School of Surgery—1958-1959
Residency—Michael Reese Hospital Chicago, Illinois—1959-1963



Jorge T. Froilan, M.D.
1697 Ala Moana Blvd.
Honolulu, Hawaii 96815
OTOLARYNGOLOGY
University of Santo Tomas—1955
Internship—Niagara Falls Memorial Hospital—Dec. 31, 1958
Residency—St. Alexis Hospital—June 30, 1961
University of Colorado Medical Center—June 30, 1964
Polyclinic Hospital—1960



Herbert K. N. Luke, M.D.
888 South King Street
Honolulu, Hawaii 96813
OCCUPATIONAL MEDICINE
St. Louis Medical School—1954
Internship—State University of New York, Up State Medical Center Syracuse, New York—1954-1955
Residency—Cochran V.A. Hospital, Barnes Hospital Unit
St. Louis, Mo.—1955-1959

HAWAII MEDICAL JOURNAL

County Society News

Hawaii

Drs. Edward Payne and Andrew C. Ivy, Jr., were guests at the January 20 meeting. The first item of business was the election of Drs. Loo and Francis Wong to the Board of Censors. The President designated Dr. M. H. Chang as chairman. A discussion on sending students to participate in the Careers Day program in Honolulu was tabled. A list of committee assignments was reviewed and all hospitals, no matter how small, were urged to establish their own utilization committees. A conversion factor of 5.00 was established for the RVS. HMSA Medical Directors were asked not to resign. A purchase of a slide projector was authorized. An ad hoc committee consisting of Drs. Bergin, Haraguchi, and Okumoto was appointed to organize a press release relative to the Society's reason for terminating the contract with HMSA. An allocation was made to pay for secretarial work for a trial period. It was voted to invite Dr. Ansfield for a breakfast meeting. The matter of a March speaker was tabled. Dr. Belcher will talk on tranquilizers for the regular February meeting.

Dr. Payne advised that the Health Department is interested in extending the cytology clinic program to Hawaii. The indigent cases will be paid for at the rate of $4.00 for reading the Pap smear and the same amount for taking it.

Dr. Ivy spoke on the different aspects of the overall PR program. It was voted to have all or part of the Health Fair sent to Hawaii following its presentation in Honolulu and suggested that the HMA should help underwrite the cost.

* * *

The February 17 meeting was held at the Tropics Lanai. It was believed that osteopathic physicians in Kona want hospital privileges in that area. It was moved that the matter be referred to the Kona Hospital. The motion died for lack of a second and the matter was tabled. A discussion on tuberculosis converters was followed by a motion to approve the prophylactic treatment for tuberculosis converters who are contacts of tuberculosis patients, with the request that the private physicians be kept informed of patients' progress. Several letters relative to prevailing fees were read. Mr. Veltmann's letter indicated that members of HMSA would like to meet with Dr. Helms to determine the feasibility of establishing a prevailing fees program. It was voted to advise the HMSA that unless the Hawaii County Medical Society is accepted by HMSA as a spokesman for its membership, it is not in a position to negotiate on this or any other matter. A discussion on where to hold future meetings and who to invite ended with the decision to leave this up to the officers. It was voted to donate $20 to the Children's Society in memory of Mr. Wessel, but before implementation can take place, the motion's constitutionality will be checked. The meeting ended with a talk by Dr. Belcher on the use of tranquilizers.

Honolulu

Approximately 310 members attended the annual meeting held on December 7. Six new members were introduced—Guy Heder, Wallis B. Lewis, Edward Taras, William Davis, Kenneth Christensen, and Robert Noyes. While the ballots were being counted, several announcements were made: the Society's relationship with HMSA, Community Chest, and 1966 dues. Dr. George Mills reported on the meeting he attended in Philadelphia on Utilization. Mrs. Charles Yamashiro reported on the Woman's Auxiliary activities for the past year. Dr. Robert T. Wong read his president's report and was presented with a plaque in recognition of his leadership. There being no questions or comments regarding the annual reports which had been mailed to the membership, they were accepted as circulated.

The following were elected: Officers—President-Elect, George E. Mills; Secretary, Keith F. O. Kuhlman; Treasurer, Herbert Y. H. Chinn. Board of Governors—William W. L. Dang, Kenneth Chinn, Thomas Frissell. Alternate Board of Governors — James W. Cherry, Richard S. Omura, Coolidge S. Wakai. Board of Censors—Robert T. Wong. Medical Practice Committee—Samuel D. Allison, Scott C. Brainard, Richard T. Mamiya. Regular Delegates to HMA—Robert P. C. Ho, William W. L. Dang, George Goto, Thomas Frissell, Frederick Shepard, B. A. Richardson, Robert T. Wong, Edward W. Boone, Carl H. Lum. Also elected were 25 alternate HMA delegates. The newly elected officers were installed in a ceremony presided over by Dr. O. D. Pinkerton.

* * *

Approximately 300 members attended the January 4 meeting where new members Jorge T. Froilan and Joseph Hathaway were introduced. The speaker for the evening was Dr. Thomas Hale Hamilton, President of the University of Hawaii.

The final report of the annual election was presented and filed. A special series of lectures by Dr. C. D. Haagensen on breast cancer was announced for January 11-14. The membership was reminded of the postgraduate course in allergy sponsored by the HAGP.

Reports on HMSA were given by Drs. Randal Nishijima, Chew Mung Lum, and John J. Lowrey. Dr. Arnold, Jr., moved that the Society give a vote of confidence to Dr. Lum and his negotiating committee for an outstanding job, to thank them for their noble efforts thus far, and to ask that they continue to negotiate for the Society. The motion was seconded and passed.

The meeting concluded with a report by Dr. George Mills on the status of the Foundation and its possible role as a carrier for Part B. of the medicare law.

* * *

Approximately 230 members attended the February 1 meeting which featured a symposium on malpractice. The panel of speakers included the following attorneys: Myer Symonds, Martin Anderson, Walter Chuck. Reports were made on the HMSA negotiations, the Foundation, and the Medical Plaza, Inc. Dr. Norman Sloan announced that the American Cancer Society had additional films which they would like to present to the Society and asked for comments from the members.

Kauai

The December 7 meeting opened with a discussion by Dr. Gordon Liu on aspects of Social Security disability benefits. Secretaries from the clinics and physicians' offices were invited to attend this portion of the meeting. Reimbursement of Mr. Horty's expenses was approved and it was voted to get Society approval before future commitments of this nature are made. A letter from Dr. Tomita which gave supplemental information on the Foundation was read. After reading a communication on utilization committees it was voted to write to the AMA to obtain booklets on this subject.

continued page 350

HAWAII MEDICAL JOURNAL

Notes and News

Elected, Appointed and Honored

We were heartened by the election of a solid coalition quadrumvirate of county officers, *viz,* **John Lowrey** as President; **George Mills** as President-elect; **Keith Kuhlman,** Secretary; and **Herbert Chinn,** Treasurer. There were scattered skirmishes over the secretarial position (henceforth referred to as the Battle of the Pediatricians and Surgeons), but with the elections over and the HMSA issue looming menacingly, we are proud to say that we are once again sailing a tight ship. We congratulate **William Dang, Thomas Frissell,** and **Kenneth Chinn** for their election to the Board of Governors.

On the political front, **George Bracher** of Hilo was appointed to the Hawaii County Library Advisory Commission by Governor Burns.

We note that **Howard Liljestrand** was installed as President of the Hawaii Academy of General Practice with **Robert Chung** as President-elect and **Fred Reppun** still secretary-treasurer. Howard succeeded **Walter Ozawa. Kenneth Christensen** and **Herman Kramer** are new members and the Academy is now committed to 150 ambitious hours of postgraduate medical training in the next three years.

Pediatrician **Cal Sia** is third Vice-president of the Child and Family Service and Surgeon **Lester Yee** is a newly elected director of the Central Pacific Bank. Pediatrician **Sorrell Waxman** is Acting Director of the Birth Defects Center at Children's Hospital and Psychiatrist **Dorothy Natsui La Fon** is Director of their Child Guidance Clinic.

The Hawaii Society of the Sons of the American Revolution elected **Homer Benson** president. Homer replaces Robert Simpson, past president. **William Natoli,** a qualified pilot and amateur radio operator is the new medical officer of the Hawaii Wing CAP. **Grover Batten,** past Cancer Society President, was installed as Worshipful Master of Lodge Le Progrès de L'Océanie 371 at the Masonic Temple in Waikiki. **B. R. Mehta** is the new president of the Waianae Businessmen's Association. **David Pang** is President of the United Chinese Society, **Sam Yee,** President of the Pun Tao (Birthday) Club, and **Abe Kamsat,** Adviser to the same club. (Incidentally we have heard David's beautiful Chinese dialect and learned that Abe is quite an able Chinese linguist.)

Donald W. Brown, who left the Medical Group in 1963, has been appointed Associate Professor and head of the University of Colorado Medical Center's newly established division of nuclear medicine. His picture appears in the March 21 issue of *JAMA*.

Professional Moves

The Oriental oracles assure us that the Year of the Horse gets us off to a galloping start. We welcome the following: ophthalmologist **James Johnston,** who has located at 1834 Nuuanu Avenue, the Pali Medical Building where **Keith Kuhlman, Catalino Cachero,** and **Fred Dodge** have associated in the practice of medicine and surgery; pediatrician **Edward Kagihara,** who has associated with the Windward Medical Center; OB man **Edward Taras,** who has associated with the Fronk Clinic; general surgeon **Clifford Chang,** who has located at the Professional Center; another OB man, **Harry Nakata,** who has located at the Medical Arts Building; internist **Buenaventura Realica,** who has associated with the Ewa Clinic; and our first pediatric surgeon in town, **Walton Shim,** who has located at the Professional Center Annex.

Now that we have located and associated everyone new, let us review the situation at the State Hospital, where it is expected that only one full-time psychiatrist will be left for the more than 800 State Hospital patients when **Robert Spencer** leaves in March for the Oregon State Hospital. **Andrew Mertz,** Executive Director of the Mental Health Division, does strike an optimistic note with the announcement that two more psychiatrists will be coming this spring and summer, and many psychiatrists in private practice work part time to help ease the personnel shortage. The hospital fortunately has four psychiatric residents, which roughly comes to 200 patients per resident. It seems that our legislators are going to have to offer something more than the Hawaiian clime to entice qualified psychiatrists to come here.

The Vietnam war and the doctor draft seemed quite

MERTON H. MACK, M.D.
1905-1966

Merton H. Mack, M.D., was born April 3, 1905, in Ascutney, Vermont. After graduating from Boston University School of Medicine in 1929 and interning at the Mountainside Hospital in Montclair, New Jersey, he came to Honolulu in January, 1930, for further training at The Queen's Hospital. He returned to the mainland in 1949 for a three-year residency in plastic surgery and was certified by the Board of Plastic Surgery in 1956. He died of a pulmonary embolism on January 7, 1966. He is survived by his wife Mildred and one son, William.

Dr. Mack will be remembered by his patients and colleagues and friends as a quiet, unassuming physician and gentleman. He was not without "fire" but he seldom dissipated his energies in wasteful talk. Instead, he applied his energies to his painstaking work with those who needed the skills that he had as a physician. Though handicapped by the loss of one lung, he worked for years to restore the physically handicapped to more comfortable and productive lives. He was never heard to preach, and his gentle manner and dedication to his work are worthy of emulation.

Dr. Mack became specialized in plastic surgery after several years of general practice. He will be remembered as a dedicated servant to his patients in his earlier years in general medicine and remembered by his colleagues as an able specialist in his later years. Until the day that his immortal spirit left this troubled world, it worked to brighten the lives of the sick and the handicapped.

R. Frederick Shepard, M.D.

remote until pediatricians **Dennis Fu** and **Toshihiko Kawasugi** received their personal correspondence from LBJ. Captains Dennis Fu and Tosh Kawasugi are leaving May 1 for Fort Sam Houston. We fail to understand why pediatricians are being drafted, but then our lot is "not to question why, but just to do and die" . . . was it?

Sportsmen

We rush pellmell to the golf course, the tennis court, and the polo field; we strike so furiously at an inert white ball which has done us no harm; we tan the fuzz off tennis balls and chip the paint off a polo ball, all in the name of sports. Next time we vent our anger on a poor inanimate ball, perhaps we should indulge in a little self-analysis . . . Was it this morning's surgery which did not go well, or that wailing child who tried to bite our fingers as we gave a shot, or that midnight house call which could have waited till morning . . . Our advice is slow down that swing a bit and the game may improve.

Turf Diggers: With weather improved, the courses are dry and playable once more. At the OCC, **Sam Clark** was 4 up and **Marquis Stevens** 2 up in match vs par, while Slamming **Fred Warshauer** won individual stableford with 35 points. At the Waialae in December, **Mac Mitsuda** won A flight honors while **Ted Tomita** tied in C flight. Mac and **Roy Tanoue** won team prize with 79 points. In January, **Toots Fujii** tallied 41 points to win individual stableford while **Gil Freeman** won in A flight. **Roy Tanoue** with 41 points tied with 3 others for A flight honors. In February, **Gil Freeman** and **Albert Ho** won team medal. Albert continued his winning streak to pace A flight while **Ted Tomita** tied in C flight. Bill tied for first in B flight while Bill and **Richard Chun** won team best ball with net 62.

At the Ala Wai, competitor **Herbert Takaki** took B flight monthly honors while **Kyuro Okazaki,** a devotee of Chi Chi Rodrigues' style, won second place. **Paul Tamura,** who has his own style, was third. Perennial winner **Ike Nadamoto,** whose game is like the weather, shot a net 66 in his last game and overtook four other leaders to cop second place in A flight.

Polo: It seems that **Masato Hasegawa,** busy pediatrician, Queen's Chief of Staff, and lecturer in constant demand, has really worked off his inhibition, for his game has improved by leaps and bounds. He was a constant scorer, rather than an incidental team member, in the recent Kapiolani polo tilts.

Tennis: We learned that some physicians who cannot get up before 8:00 AM on weekdays are on the tennis courts by 6:30 AM, playing a Round Robin series, on Sunday mornings. Admittedly, some of these bleary-eyed Spartans have to be roused with two or three telephone calls by tournament chairman **Sau Ki Wong,** but nevertheless they get out there. The group includes **Hiro Tottori, Cal Sia, Charley Ching** (who never did this before his recent marriage), **Ben Tom** (who goes to 5:00 AM mass before playing), **Hunky Chun, Ted Tseu, George Kimata, Tom Oshiro** (who frequently comes straight from Queen's Delivery), *et al.* We could suggest a psychiatrist join the group to study the motivations involved, but then, a well-balanced psychiatrist would not dream of rising at this hour on Sundays.

Nautical Notes: In January, sunburned sailor **Fred Shepard** was the Cal 20 class winner in the Waikiki Yacht Club's two-day regatta. **Les Vasconcellos** placed fourth in the 210's (in a field of four) and **Els Harris** was second in the PC's. Fred repeated his win in the February Cal 20 event.

Al Majoska, who has a long and varied career as senior regatta expert in the State, was named the first member of the newly created Waikiki Yacht Club's Regatta Hall of Fame for outstanding contribution to yacht racing.

Miscellaneous: We congratulate **Francis Wong** for being named the Big Island's 1965 Sportsman of the year. Francis has headed virtually every local major league one time or another and is the only person to win this award twice, the first being in 1949. At the moment, he is identified as the man who put amateur boxing back on its feet on the Big Island.

Members Speak Up

The following contributions to medical literature were brought to our attention: **L. Q. Pang,** "Carcinoma of the Nasopharynx," *Arch. Otolaryngol.* 5:82 (Dec.) 1965; **Colin C. McCorriston** "Sparteine Sulfate: A Potent, Capricious Oxytocic," *Amer. J. Obstet. and Gynec.* 5:94 (Jan. 15) 1965; **William Dung & T. L. Lin** "Subacute Bacterial Endocarditis due to Hemophilus aphrophilus," *Amer. Heart J.* 5:7 (Feb.) 1966.

Our prexy, **O. D. Pinkerton,** in his Year of Progress message comments on the outstanding medical achievements of the year: the synthesis of a self-propagating nucleic acid, which is an approach to life synthesis and a step toward the question, "What is life?"; the discovery of virus which may be implicated in the production of human leukemia; and the cultivation of the leprosy bacillus, which may be a first step in development of more effective therapeutic drugs. He then related the changing social and economic conditions and the injection of third parties creating atmospheres which make it difficult for the profession to function viz the Medicare legislation and HMSA. Regarding the HMSA issue, O.D. restates our position that "the medical profession is intent upon maintaining quality control of medicine. Physicians must remain fast to their principles and act in the best interest of their patients." He ends the message with a prophetic statement, "The next few decades will present triumphs of which we do not even dream now."

We enjoyed satirist-humorist **Morton Berk's** letter to the editor and wish to extract some gems therefrom: "This is a happy day for us citizens of Hawaii. Just to think that after merely taking a junket trip to Vietnam, our representative in Congress, the great statesman, Sparky Matsunaga, now approves of the United States action there The Republicans have long ago put their shoulder to the bi-partisan push to rid South Vietnam of the Communists I can only presume that the Democrats have been withholding information from our Sparky, and I for one intend to let LBJ know that us card-carrying Republicans in Hawaii (we are an even baker's dozen at last count) resent such discrimination Thank you, Congressman Matsunaga. We hope you will continue to ferret out the justification of our Government's activities in foreign lands. Yours for greater ineffectuality!"

Masato Hasegawa, horticulturist, is blazing mad at rats who have been stealing his prize guavas and taking the fruit into the motor of his Jaguar. "They must be high class rats," he complains. "They never bother having a party in my wife's Chevvie—only my Jaguar."

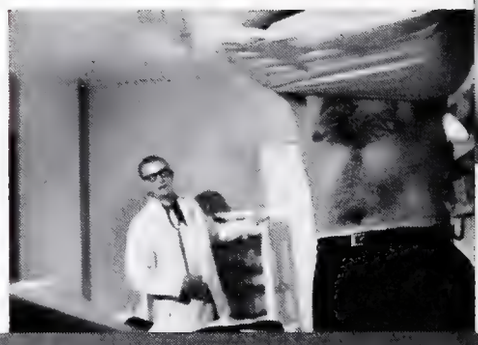
The same Masato Hasegawa, Queen's Hospital Chief of Staff, told a meeting of the hospital's utilization committee that the only way medicare can work is through the experience and brainpower of physicians. He feels that guidelines for the progress cannot be set up on the basis of statistics alone. He prefers the word "guidelines" to "criteria" because "criteria denotes an absolute and there are no absolutes in medicine."

Hawaii's own **I. L. Tilden** is scheduled to be one of the key speakers at the American Cancer Society's 1966 Scientific Session at the St. Francis Hotel in S. F. May 11.

Our attention was caught by a small item which is quoted in full as an object lesson to us: "Editor, the *Star-Bulletin:* Regarding the recent and increasing troubles of the more responsible Kuhio Park Terrace residents: Putting pigs into palaces creates not princes, but

continued page 350

This is the new, everyday penicillin for common bacterial respiratory infections...



10:38 A.M.

10:05 A.M.







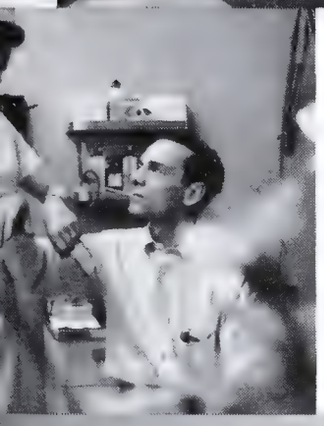
10:42 A.M.



11:00 A.M.



11:20 A.M.



11:47 A.M.



12:01 P.M.

1:15 P.M.

...with extra therapeutic coverage at no extra cost

Clinical success

Tegopen (sodium cloxacillin monohydrate) assures you a high degree of clinical success against respiratory infections. A recent comprehensive analysis of office patients administered the drug proves the point: *96% of 259 bacterial respiratory infections treated were cured or improved.*[1]

Kills all common respiratory Gram-positive cocci

In contrast to the limited Gram-positive spectrum of penicillins G and V, Tegopen (sodium cloxacillin monohydrate) destroys strep, pneumo and virtually *all* staphylococci.

Bactericidal in action

Tegopen (sodium cloxacillin monohydrate) is always bactericidal, killing the offending organism. Erythromycin[2] and triacetyloleandomycin[3] are essentially bacteriostatic agents which merely suppress bacterial growth.

Exceptionally well tolerated

There is little likelihood of dose-related toxicity with Tegopen (sodium cloxacillin monohydrate). With erythromycin, when given in higher recommended doses, G.I. irritation is frequent.[2] Moreover, erythromycin estolate or triacetyloleandomycin may cause liver damage if administered over extended periods.[4]

Low in cost

Even with all of its extra advantages, Tegopen (sodium cloxacillin monohydrate) is priced comparably to penicillins G and V, and 33% less than either erythromycin or triacetyloleandomycin.

BRISTOL THERAPEUTIC SUMMARY: For complete information, consult Official Package Circular. *Indications:* Infections due to streptococci, pneumococci and staphylococci, particularly penicillin G-resistant strains of the latter. *Contraindications:* A history of severe allergic reactions to penicillins. *Precautions:* Typical penicillin-allergic reactions may occur, particularly in hypersensitive persons. Mycotic or bacterial infections may occur. Safety for use in pregnancy is not established. Assess renal, hematopoietic and hepatic function periodically during long-term therapy. *Adverse Reactions:* Nausea, epigastric discomfort, flatulence, diarrhea, eosinophilia, and allergic manifestations. Moderate SGOT elevations have been noted. *Usual Dosage:* Adults: 250 mg. *q.* 6 *h.* Children: 50 mg./Kg./day. Children weighing more than 20 Kg. should be given the adult dose. Treat beta-hemolytic streptococcal infections for at least 10 days. Administer 1 to 2 hours before meals.

References: 1. Data on file at Bristol Laboratories. 2. Geraci, J.E. (Panel Discussion, M. Finland, Moderator): Antibiot. Ann. 1958–59: 1051, 1959. 3. Thompson, W.T, Jr.: South. M. J. *56*:844 (Aug.) 1963. 4. A.M.A. Council on Drugs: New Drugs 1965, Chicago, A.M.A., 1965, pp. 7, 46.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York

IN TONSILLITIS/PHARYNGITIS
OTITIS MEDIA/SINUSITIS
BRONCHITIS AND PNEUMONITIS

TegoPen®

SODIUM CLOXACILLIN MONOHYDRATE

ONLY 20 MINUTES FROM
DOWNTOWN HONOLULU . . .

KAHANAOLA

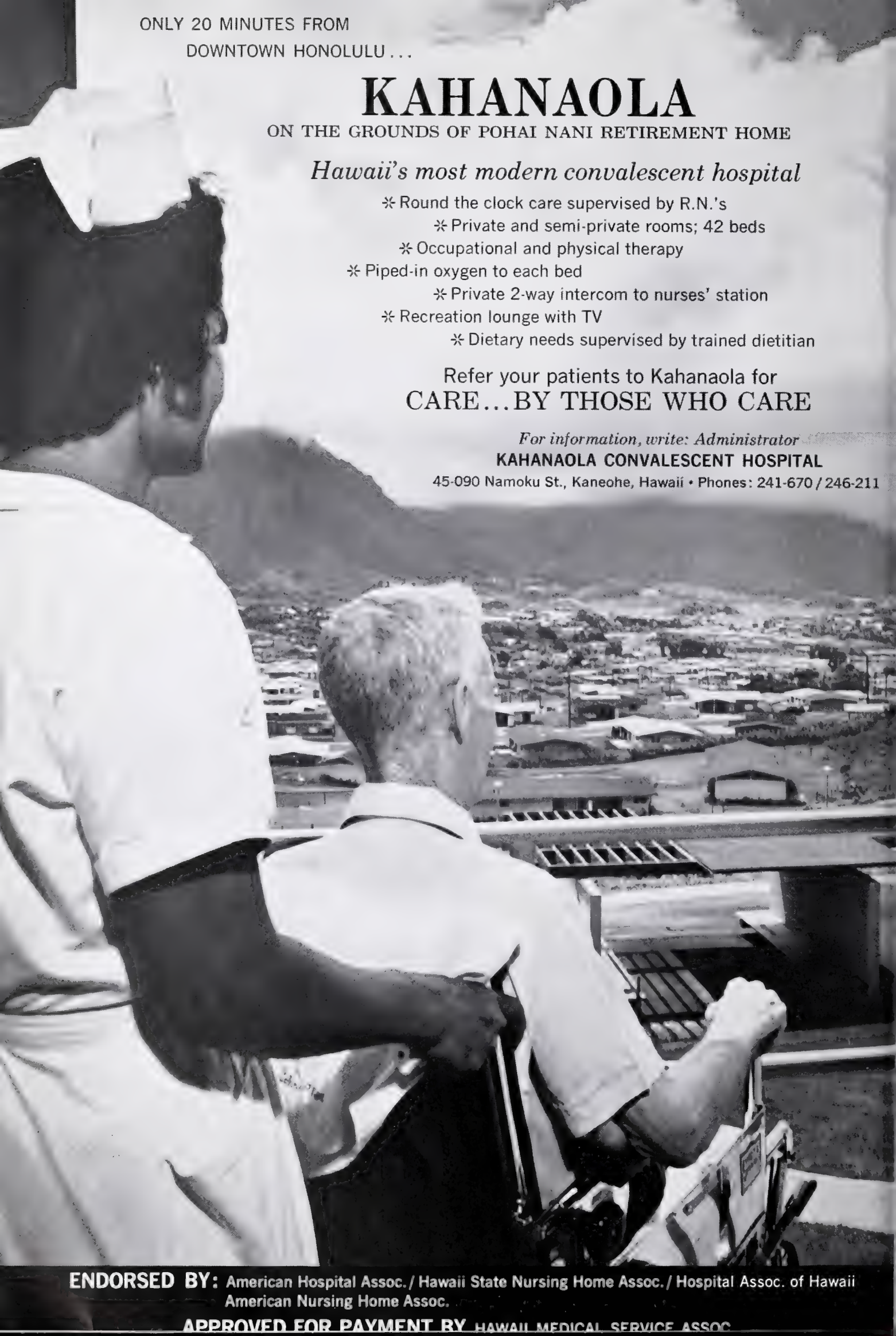
ON THE GROUNDS OF POHAI NANI RETIREMENT HOME

Hawaii's most modern convalescent hospital

- ✲ Round the clock care supervised by R.N.'s
- ✲ Private and semi-private rooms; 42 beds
- ✲ Occupational and physical therapy
- ✲ Piped-in oxygen to each bed
- ✲ Private 2-way intercom to nurses' station
- ✲ Recreation lounge with TV
- ✲ Dietary needs supervised by trained dietitian

Refer your patients to Kahanaola for
CARE . . . BY THOSE WHO CARE

For information, write: Administrator
KAHANAOLA CONVALESCENT HOSPITAL
45-090 Namoku St., Kaneohe, Hawaii • Phones: 241-670 / 246-211



ENDORSED BY: American Hospital Assoc. / Hawaii State Nursing Home Assoc. / Hospital Assoc. of Hawaii
American Nursing Home Assoc.

APPROVED FOR PAYMENT BY HAWAII MEDICAL SERVICE ASSOC

Let the Versatol system point the way to greater accuracy and precision in clinical chemistry.... Your course is charted by the limits of confidence on the Versatol full-range charts. Your daily guides are the Versatol standards (abnormal as well as normal), which help you steer past potential sources of error.

The Versatol concept is twofold: (1) human serum should be matched against human serum, not an aqueous solution; (2) a standard must have known, weighed-in amounts, not merely an average of assay results. Only Versatols fulfill these requirements.

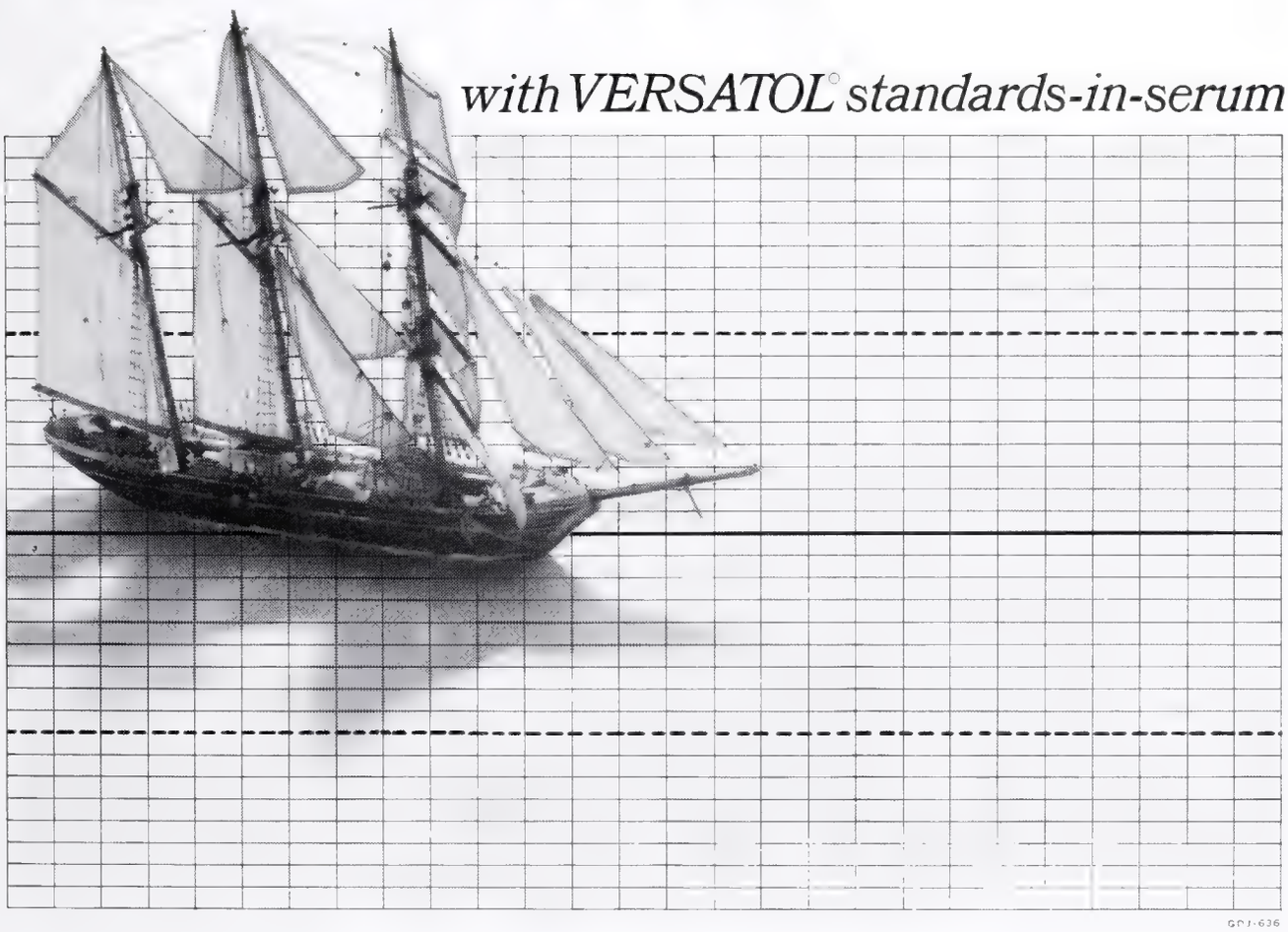
Versatol Full-Range Quality Control Set / Versatol / Versatol-A and Versatol-A Alternate / Versatol Pediatric / Serachol® / Versatol-E-N / Versatol-E / Versatol Full-Range Quality Control Workbook / Workshop in Quality Control

GENERAL DIAGNOSTICS DIVISION

WARNER-CHILCOTT LABORATORIES (INC.), MORRIS PLAINS, N.J.

'On Course'

with VERSATOL® standards-in-serum



GDJ-636

HAWAII TECHNOLOGISTS' BULLETIN

Official Publication of the Hawaii Society of Medical Technologists

Editor: STELLA YOSHIDA, U. S. Army Tripler Hospital

President's Message

This Society of ours has been growing. And its growth is beginning to resemble that of an unchecked jungle vine. We are faced with the necessity of undertaking some careful trimming and judicious pruning. Instead of allowing our energy to run off in innumerable directions at one time we must try to conserve our sources of strength and channel them into important and meaningful growth.

The Board of Directors, various committee chairmen, and a special planning committee are studying the situation. So far we are committed to find—as soon as possible—a location in which we can centralize our activities. In other words, we need an office and we need some files. And we need some people to take care of both.

There are two other activities which need reasonably prompt attention and, I hope, improvement. First, our monthly meetings. The habit of monthly meetings goes back to the beginnings of HSMT. They have become a nightmarish responsibility for our President-elect. Where to meet? what menu? who'll speak? is there a concert that evening? and more. We find ourselves holding meetings to consider matters which the Board of Directors could handle. Committee chairmen fail to take sufficient initiative, because discussions at general meetings leave doubts as to the extent of a chairman's authority and responsibility. And speakers are frequently selected by a group of criteria headed by "Who'll be off that night and be willing to speak?"

For the reasons presented here, and perhaps a bit facetiously, I have suggested that we hold three, or possibly four, meetings each year. So far no one else has expressed an opinion. How about you?

The second thing which I personally feel needs early attention is this publication. We have had no really good technical material submitted. If such material ever does get written, the main section of this JOURNAL is the proper place for its publication.

A quarterly newsletter would be easier to publish. Deadline and publication dates would not be two months apart, thereby making it possible to print more timely comment, and news that is really new. Employment opportunities, news from ASMT. nomination and election news, questions and answers, and meeting notices and reports would be our material. Perhaps guest comments from our pathologists.

The cost of such a publication could be considerably lower than the cost of publishing in this JOURNAL, especially if we obtained our own advertisers, and circulation could be increased at a moderate cost per individual copy.

Thus far only our Publications chairman has expressed similar opinions. We want to know what you think.

Continuing Education in the Brew

HSMT members may look forward to another active educational program beginning this fall. The successful pilot program begun last year has given the Education Committee incentive to explore new horizons.

Last November the Ortho Pharmaceutical Corporation and the HSMT cosponsored a seminar in blood banking attended by nearly 209 individuals. It was most gratifying to see fellow members from the neighbor islands present at this event. And the 10-week (20 hours) course in "Principles and Applications of Immunology," given by Dr. Mitsuo Yokoyama, Director of Research of the Kuakini Research Foundation, enrolled 47 medical technologists of Oahu. These projects speak for themselves; our members are willing to spend time and money to upgrade their knowledge and ability.

Every effort will be made to sponsor at least one workshop or seminar during 1966-67. The Education Committee is now ready to make an earnest request to the University of Hawaii for a hematology course. Our recent graduates in medical technology are well aware of the fact that a campus course in hematology never materialized during their undergraduate years, owing to the lack of teaching personnel.

This problem has finally been solved since many hematologists and pathologists of our fair city have verbally agreed to participate in the teaching of the course. We are now able to negotiate with the

University of Hawaii and our request will involve the following points:

1. Lecture-series course in hematology with different hematologists and pathologists.
2. A 10 to 15-week evening course, meeting once a week for 2 to 3-hour sessions.
3. Course of study should be at the level of a medical school course which permits enrollment by medical technology students.
4. Credit course with option to audit for those not interested in credits for an advanced degree. If the course can only be offered on a non-credit basis, a nominal fee will be requested.
5. Need for individual laboratory work if space and facilities permit. Demonstrations and slide projections can be an alternative.

Kauai Society Thanks HSMT

The Medical Technologists of Kauai wish to express appreciation to the Hawaii Society of Medical Technologists for sponsoring the very worthwhile Ortho Pharmaceutical Blood Bank Seminar in November.

We also wish to thank those organizations willing to give help to the outer island hospitals when needed, particularly Queen's, Pathology Associates Medical Laboratories, and Kuakini. Occasionally it has been necessary to send a technologist to Honolulu to observe various techniques or seek advice on a new procedure. The above have been of great assistance to us from time to time.

The Kauai Society of Medical Technologists is a small group made up of the entire technological staff of all three Kauai hospitals. The group is directed by our pathologist, who is keenly interested in group discussion, quality control, and standardization of methods for all three hospitals. Excellent attendance has been the rule, indicating the value of such meetings.

We would like to encourage HSMT in the sponsoring of additional seminars in practical techniques, which we will endeavor to attend. Due to the distance and expense of attending HSMT meetings in Honolulu, it would be very much appreciated if a summary of any particular subject of interest and value to the smaller hospitals could be sent to the outer island members.

Great benefit could be derived from HSMT setting up a program whereby outer island technologists could more easily participate in one-day courses of practical instruction or observation at any one hospital.

JEAN I. CROSS RT(CSRT)
G. N. Wilcox Hospital
Lihue, Kauai

1966 HSMT Convention

HSMT's Annual Convention will be held on May 19, 20, and 21, 1966, at The Queen's Hospital.

The workshop in bacteriology will be conducted by Baltimore Biological Laboratories on May 20 and 21. Lectures will be presented each day.

The annual HSMT meeting will be held before the May 20 lecture and box lunches will be provided. The banquet will be held on May 21 at the Pearl City Tavern.

Keep these dates in mind and further details will be sent to you in the near future. ■

OCEANSIDE GOLF
on beautiful Kauai
Enjoy uncrowded golfing any day of the week, any week of the year at championship Wailua Golf Course . . . just across the street from your delightful Polynesian accommodations at

Coco Palms Resort



Rates from $17 per day, double
Special group package rates also available

Island Holidays Resorts



Call 931-111 for information and reservations



CUTEST UNIFORMS

Where Fashion is Foremost with Women in White

GOOD SERVICE IS UNIFORM WITH US

★

Our New Location is at

1969 S. KING ST. • PHONE 964-886

New Proprietor

Mr. Arthur M. H. Chung

★

We Carry All Name Brand Uniforms and Also Doctors' Jackets and Smocks

★

We Specialize in Custom Made Uniforms

County Society News *continued from 337*

As a follow-up of the November 17 meeting between HMSA and Society members, Mr. Veltmann wrote that he had been authorized to meet with the physicians from Kauai to develop a pilot program in regard to fee schedules. Dr. Kim advised that forms and reporting procedures for the cytology program are now available. It was voted to table until a later meeting consideration of inviting Dr. Ivy to a future meeting. The information relative to Dr. M. Critchley's March visit was referred to the Program Committee In regard to a request from HAMPAC to include their dues with Society billing, it was voted that this be handled by individual members as in previous years rather than the Society's paying in its name. It was voted to obtain a film on the "Long Term Use of Anticoagulants" for showing at each of the hospitals. Laboratory technicians will be invited to attend the showing. Dr. Kim spoke on the Department of Health's proposed Home Health Care Program. It was voted that for lack of adequate staff the Heart Association's clinic program not be authorized at the present time. The final Treasurer's report was approved.

In response to a request from Aetna regarding the Relative Value Study, it was voted to advise that this would be taken under advisement. It was voted that members handle contributions to the Physicians Benevolent Fund on an individual basis. A letter of thanks from Dr. Bernstein for Dr. Miyashiro's work on the Mental Health Steering Committee was read. The results of the annual election were announced: President, Y. Miyashiro; Vice President, S. R. Wallis; Secretary-Treasurer, J. Morris; Alternate HMA Delegate, M. Brennecke.

* * *

The Pilot HMSA Program Study Committee reported at the January 6 meeting. No conclusions were reached on the proposed program. A letter from the HMA relative to Utilization Review Committees was read. It was voted to invite Dr. Ivy to speak at the February 1, 1966, meeting. No action was taken on the proposed School Health Program which will be submitted to the Legislature.

* * *

Guests at the February 1 meeting were Drs. O. D. Pinkerton, T. T. Tomita, Rodney T. West, Andrew C. Ivy, Jr., and George H. Mills. The 1966 county dues were set at $49.00. Following a discussion on the forthcoming HMSA meeting on Kauai, Dr. Ivy gave a brief resumé of the work of his Public Relations Committee.

The president, Dr. Miyashiro, reviewed the meetings and discussions held relative to HMSA. He noted that at the December meeting HMSA representatives slanted all discussions not toward the use of the Relative Value Study, but toward the prevailing fee schedule. The members were advised that, following the special January 11 meeting, Drs. Miyashiro and Wade met with Mr. Joe Veltmann and Mr. John Castellucci, Executive Director of the National Association of Blue Shield Plans. Mr. Castellucci pointed out numerous irregularities in the relationship between the doctors and HMSA. Mr. Veltmann was asked about HMSA's plans to negotiate with the other counties. He advised that HMSA was not planning to negotiate with the other counties for no contract existed between them and HMSA. He advised that HMSA had drawn up 15 proposals to be presented to the KCMS for consideration. On the question as to the use of the Relative Value Study, Mr. Veltmann declined to answer. Mr. Veltmann advised that the doctors in the other counties could participate on an individual basis if they wanted to.

Dr. Mills gave the background of the Relative Value Study, how it was conducted, and how it is used. He also spoke on the Prevailing Fees Program. He noted that this program is primarily for surgery. For the HMSA to go into the Prevailing Fees Program would require an increase in the charges to the subscribers. Medicine would have to be coinsured or indemnified. Dr. Tomita

continued from 350

The weight of clinical evidence favors Librium

With Librium (chlordiazepoxide HCl), the weight of a five-year record of efficacy and safety in clinical use is supported by over 630 reports in the medical literature. Its virtually specific antianxiety action normally reduces disturbing emotional complaints promptly without compromising the patient's mental alertness or ability to perform normal functions. Decisive results are often seen in patients who had not improved on previously used psychotropic drugs.

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d.

Side Effects: Side effects, usually dose-related, include drowsiness, ataxia, minor skin rashes, edema, menstrual irregularities, nausea and constipation. When treatment is protracted, blood counts and liver function tests are advisable. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined.

Precautions: Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, in long-term treatment and in presence of depression or suicidal tendencies. Exercise caution in administering drug to addiction-prone patients or those who might increase dosage; withdrawal symptoms, similar to those seen with barbiturates or meprobamate, can occur upon abrupt cessation after prolonged overdosage. Caution should be exercised in prescribing any therapeutic agent for pregnant patients.

Supplied: Capsules, 5 mg, 10 mg and 25 mg, bottles of 50.

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc., Nutley, N.J. 07110

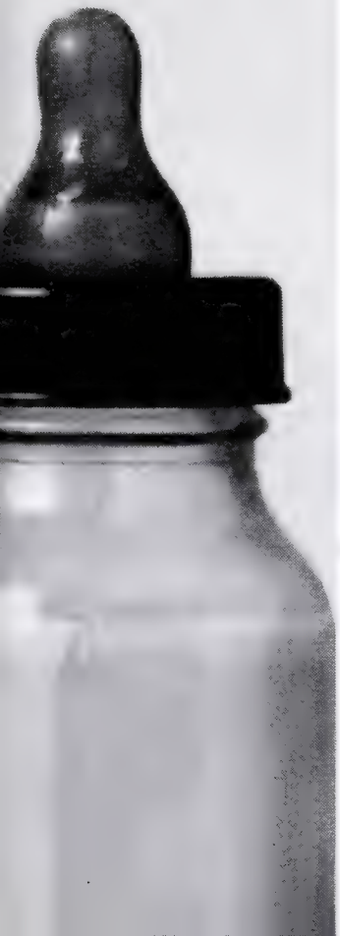
LIBRIUM®
(chlordiazepoxide HCl)

Librium is indicated whenever anxiety is part of the clinical profile, such as in...



This new hypoallergenic formula is like a milk formula in many ways...





Looks, mixes, pours and is accepted like a milk formula

New ProSobee provides a creamy-white hypoallergenic formula that makes the transition from a cow's-milk formula smoother and less troublesome than ever before. ProSobee mixes and pours like milk-based formula, and to all outward appearances seems just like a routine formula. There is no coffee color...no "beany" aroma or flavor...no nipple-clogging coarseness.

ProSobee formula utilizes a unique soy-protein isolate which eliminates all the disturbing physical negatives associated with most soy formulas. A mother's unfavorable reaction to the look and smell of a soybean formula could be easily communicated to a sensitive infant. Milk-like ProSobee formula helps keep feeding time the natural, pleasant experience it should be.

Stool patterns and nutritional values like a milk formula

The stool patterns of infants on ProSobee resemble those of infants on routine milk formulas. There is no offensive odor, no tendency to looseness, no suspicious staining of diapers. Nothing to alarm or disturb the mother...nothing to motivate time-consuming phone calls.

Weight gains obtained with ProSobee formula are comparable to normal gains for infants on cow's-milk formulas. Its protein efficiency value closely approaches that of casein, and is significantly higher than values found in whole soy flour formula. A recent study,* moreover, showed that only ProSobee formula was *devoid of antigenicity,* when compared with two commercially available soybean infant formulas.

*Crawford, L.V., *et al.:* Ann. Allergy *23*:303 (July) 1965.

PROSOBEE IS A TRADEMARK OF MEAD JOHNSON & COMPANY.
©1966, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA.

ProSobee®

MILK-FREE FORMULA WITH SOY ISOLATE

Mead Johnson Laboratories

Symbol of service in medicine

reported on the work of the Negotiating Subcommittee. He said the main issue was who was to control medicine —HMSA or the doctors. Dr. West spoke of the work he had done with HMSA since the time he was one of the original members of the HMSA Board.

The Honolulu guests were excused from the meeting and after a brief discussion it was voted to cancel the master contract with HMSA.

Maui

On April 26 a luncheon meeting was held to discuss HMA annual reports. Delegates were given unofficial instructions as to the desires of the membership.

* * *

No business meetings were held during May. However, on May 16 the University of Hawaii Lyceum Series was sponsored by the Society. David Crowell, Ph.D., spoke on "Individual Differences in Newborn Babies." About 25 nurses, doctors, and other interested people in the community attended.

* * *

The June 15 meeting was held at the Wailuku Hotel. Drs. Albert Keegan and Stanley Wright were the guest speakers. At the business meeting that followed, the status of HMSA negotiations was discussed. A letter from HMA suggesting that the Society develop a series of newspaper articles about interesting cases was read. It was decided that individual doctors be encouraged to contact the HMA's Public Relations Committee through the local committee member if they should have cases which might be of interest. The members felt that duplicating the program locally was not feasible since most Maui residents read the Honolulu papers. It was voted that the members be encouraged to add the 4% excise tax to their charges and show same on their bills.

* * *

A family picnic was held in lieu of the July meeting.

* * *

Drs. McGovney, Stewart, Kroutil, Idstrom, and Kempe were guests at the August 19 meeting. Dr. Kempe spoke on recent advances in immunization and antibiotic therapy. Dr. Stewart asked that individual physicians cooperate by giving emergency orders on their own patients admitted for psychiatric care when he could not be reached immediately. He also stated that a schedule of fees for psychiatrists' services to private patients would soon be released for the members to study.

* * *

A special meeting was called on September 9 to discuss the HMSA contract. It was voted to cancel the Maui County master contract with HMSA when Honolulu Society canceled its master contract with HMSA. ■

pig sties., M.D." May we comment that pig sties can be far, far cleaner than the mud one can wallow in and smear our faces with (We are happy to report that the author is not a HMA member.)

Visiting Physicians

C. D. ("C" could be for "crusader") **Haagensen,** Director of Surgery at Columbia University's Cancer Hospital and author of the classic, "Diseases of the Breast" feels that any pathologist worthy of his title will tell you that cigarette smoking causes "clear as crystal changes" in the nucleus of lung cells which show a reversal when smoking is stopped for a few years. (We wondered why some chain-smoking pathologists have recently stopped smoking). As a warning to teenagers, he quotes statistics from Denmark which show that of boys who began smoking at age 15, 50 per cent had lung cancer by age 65.

Robert James McKay, Chairman of the Dept. of Pediatrics at the University of Vermont College of Medicine, was the 18th Visiting Professor at the Children's Hospital. His special interests are "cat-scratch" disease, hereditary factors in miscarriage, and psychological considerations in childhood diseases.

Sylvia Richardson, pediatrician, lecturer, author, and Director of the Cincinnati Child Study Center, lectured on "Learning Disabilities in Children."

Fred J. Ansfield, Professor, Division of Clinical Oncology, University of Wisconsin, was the Visiting Professor of Medicine at Queen's Hospital in February and enlightened us on the present status of cancer chemotherapy.

Irving S. Wright, Professor of Clinical Medicine at Cornell Medical College, spoke on "Modern Anticoagulant Therapy" and "Medicine as Practiced in Other Countries" at the American College of Physicians Regional Meeting on Feb. 23.

Health Department

In February, State Epidemiologist **Ralph B. Berry** reported a high incidence of enterovirus infections, but felt that was no danger of an explosive epidemic. In the same breath he warned physicians of increasing resistance to penicillin by some strains of gonorrhea. He still recommends penicillin, but short-acting preparations in larger doses. He reported 72 gonorrhea cases in December. Except for one case on Kauai, the rest occurred on Oahu, 40 of the cases involving military personnel on active duty. Now we know.

Ira Hirschy, Chief of Hansen's Disease Branch, was skeptical of the Israeli report on a breakthrough in growing the leprosy bacillus. "The leprosy organism is so sensitive, so hard to grow—it might work in one place



BLEMISHES?

COVERMARK conceals all skin discolorations . . . birthmarks, brown & white patches, broken veins, tattoos, burns, scars, on any part of the body. COVERMARK is also unexcelled as an overall makeup . . . will not rub or flake off. Waterproof and Sunproof.

Lydia O'Leary
OF HAWAII
1010 ALAKEA ST., ROOM 202
PHONE 574-704

and not in another. And if only one man can do it, it won't be of much general use." He has a point.

Maui County Health Officer **F. H. Tong** announced the arrival of a new civil defense packaged disaster hospital unit which can operate a completely functional 200 bed hospital for 30 days. Instant coffee, instant tea, and now instant hospitals.

Community Notes

The Straub Medical Research Institute, directed by **Fred Gilbert,** received $21,240 from the U.S. Public Health Service for research pertaining to preventive health examinations. The project will attempt to come up with fresh approaches to improve annual physical examinations, especially in the realm of preventive medicine, and the use of new equipment, including computers. The Institute also received $6,000 from the TB Association to finance a research study on asthmatic children in Manoa Valley. **William Myers** will head the project and work with meteorologists at the University and the U.S. Weather Bureau.

Angie Connor, recently appointed Professor of Public Health at the University received $12,207 from the U.S. Public Health Service for a maternal and child health training program.

It seems Maui County Hospital was lacking a radiologist when **Linneus Idstrom** resigned less than three months after taking on the job. To fill the gap, Honolulu radiologist **Ghim Yeoh** will fly over every Wednesday till **Robert Bjornson,** the successor, arrives from Minnesota.

Walter Strode is a member of the Campaign Executive Committee of the new Hawaii Loa College, which plans to break ground this spring and start building this summer.

We were puzzled when Kauai County originally voted to retain its contract with HMSA in contradistinction to the actions of the three other county societies. It appears that their duly elected representatives had been duped, until fact finder **Yone Miyashiro,** newly elected Kauai county president, came to Honolulu, sat in on one of the HMSA executive sessions here, and appraised the situation for himself. Whereupon, he returned to Kauai and enlightened the members, and Kauai county forthwith defected along with the other counties. We thank Yone for keeping our ranks united in this crucial struggle.

We notice that the Lederle Medical Faculty Awards Committee, which includes our **Windsor Cutting,** met here in January to select 10 to 14 promising mainland medical school faculty as recipients of grants totaling $250,000. This program, which has been conducted annually since 1954, is directed at keeping talented medical teachers on the medical school staff. We wish to thank Lederle Laboratories for the three symposia held here in the past four years and look forward to this year's, especially the ono kau kau and drinks.

Conference Notes

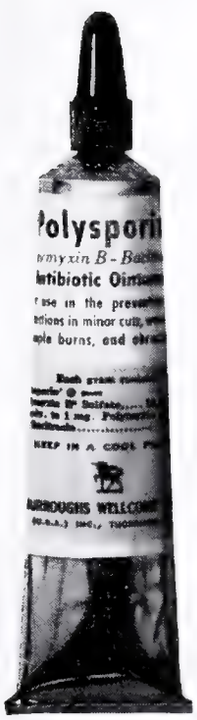
During a discussion on GI bleeding, Kuakini pathologist **Grant Stemmerman,** who rarely minces any words, denied the existence of the Mallory-Weiss Syndrome quite categorically with the comment: "This is a diagnosis by surgeons in "extremis," and a profession of ignorance . . . The longitudinal tears are caused by nasogastric tubes . . ." Our tender apologies to Drs. Mallory and Weiss. . . .

Samples of pearls dropped by bespectacled, straight-faced humorist **Fred Ansfield,** who reminds us of Groucho Marx:

- Re lung cancer in women: "They have put in their

continued page 352

in treating topical infections, no need to sensitize the patient



USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
Supplied: In ½ oz. and 1 oz. tubes
Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Notes and News *contined from 351*

time. Women have now been smoking 20 years. We are seeing as many women with lung cancer as men."

• Re gastric feeding: "Use a fine levin tube, not a rubber hose."

• Re the toxic symptoms of 11 keto 6 alpha keto progestational compound, vs. diarrhea: "But it's amazing how many people actually enjoy diarrhea . . ."

• Re sarcoma therapy, comparing surgical amputation with the results of actinomycin D with local radiation: "No skin, no fascia, no muscle, no nothing. . . ."

• Re Triple Therapy and its emetic properties: "This patient with testicular tumor . . . after one month of treatment, everytime I walked into his room, he vomited at the sight of me . . ."

On a stormy day in January, imperturbable **Bob McVay,** visiting professor at Children's Hospital, was lecturing on steroid therapy of the nephrotic. A sudden patter of rain on the windows drowned his voice, but only temporarily, for he continued without interrupting his discourse, "The sky in Hawaii is diuresing, I guess . . ."

During a lecture on psychosomatic diseases in children, Bob related the story of a henpecked pediatric resident receiving a telephone call from his wife one late afternoon after rounds. The voice over the phone was loud and clear, "Come on home" The resident retorted, "But I am discussing a case with Dr. McVay . . ." Came the reply, "You come on home this minute, you hear? If he is fool enough to stay late, that's his own business . . ." The resident's infant son soon came down with colic, which was corrected only after the Marine Corps summoned the resident's services and he returned home after a tour of duty in Korea to assume command of his wife.

continued page 354

Your stationery
is a reflection
of you...
be certain
the reflection is good!

star-bulletin printing company

the hallmark of fine printing in honolulu

DEPROL®

meprobamate 400 mg. +
benactyzine hydrochloride 1 mg.

Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

Supplied: Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.
Before prescribing, consult package circular.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-6405

FOR THE



COMPLEX

TRY DEPROL®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

a logical first choice

FOR DEPRESSION

even when complicated by anxiety, tension, insomnia, agitation or rumination.

- **Acts rapidly.**
- **Side effects at recommended dosage infrequent, usually easily controlled.**

Notes and News *continued from 352*

HAWAII CALENDAR*

HMA ANNUAL MEETING, May 11-15, 1966, Princess Kaiulani Hotel. **AMA ANNUAL CONVENTION,** June 26-30, 1966, Chicago. **PAN PACIFIC SURGICAL** Association 10th Congress, Part I, September 20-28, Princess Kaiulani. Parts II and III to follow in Japan, Hong Kong, The Philippines, Thailand, India, Singapore, Australia, and New Zealand.

APRIL

April 1-30—**Visiting Professor** Marion S. DeWeese, M.D,. Professor of Surgery, University of Missouri.

April 4-15—**Visiting Professor** Howard Lewis, M.D., Professor of Medicine, University of Oregon. The Queen's Hospital.

April 17-20—**(Postconvention)** American Orthopsychiatric Association. Kahala Hilton Hotel. Contact: Dr. Marion F. Langer, Executive Secretary, New York City.

MAY

May 11-15—**HMA Annual Meeting.** Princess Kaiulani Hotel.

May 18-June 3—**Visiting Professor** Ralph Jacox from the University of Rochester, Department of Medicine. St. Francis Hospital.

JUNE

June 19-25—**Convention,** 7th Annual Western Conference of Foundation for Medical Care. Ilikai Hotel.

JULY

July-August—**Visiting Professor** Robert Cooke, M.D., in Pediatrics, Johns Hopkins. Children's Hospital.

July 11-26—**Visiting Professor** Thomas Brenn, M.D., Professor of Medicine, University of Southern California. St. Francis Hospital.

July 17—**Symposium,** sponsored by Lederle and the Honolulu County Medical Society.

July 16-22—Fourth International Cardiovascular **Conference.** Royal Hawaiian Hotel. Contact: Dr. Verne J. Wilson, 1347 Capital Ave., Des Moines, Iowa.

AUGUST

August, 1966—**Visiting Professor** Ralph D. Sterling, M.D. Professor of Surgery. The Queen's Hospital.

August 1-6—USC **Postgraduate** Refresher Course (9th Annual). Princess Kaiulani Hotel. ■

* Errors in listings are not the responsibility of the HAWAII MEDICAL JOURNAL.

Book Reviews *continued from 334*

before surgery. McLean avoids pointing out "his way of doing things," but includes nearly every current method of cataract extraction known, treating each fairly.

PHILIP M. CORBOY, M.D.

Ocular Syndromes

By Walter J. Geeraets, M.D., 211 pp., $7.50, Lea & Febiger, 1965.

THIS SMALL BOOK, "Ocular Syndromes," is a compilation in outline form, of all the syndromes of any concern to the ophthalmologist. It should only be looked at with this in mind. The systemic importance of a disease may be forgotten when the ophthalmological symptoms are out of proportion to the general condition. However, this book could serve well as a reference for anyone who finds enjoyment in thinking of disease processes as named syndromes.

WAYNE WONG, M.D.

Synopsis of Clinical Tropical Medicine

By Oscar Felsenfeld, M.D., M.Sc., 378 pp., $9.85, The C. V. Mosby Company, 1965.

THIS BOOK covers the entire field of diseases either found only in the tropics or of world-wide distribution extending into the tropics. The diseases are grouped mainly as bacterial, rickettsial, viral, parasitic, mycotic, and several smaller groups such as "unclassified infections," poisonous plants, insects and bites, nutritional disorders, anemia, and miscellaneous. Those disease conditions which are also common in temperate zone areas, and with which one would expect the average physician to be familiar, are given only a paragraph or two of space, with the pertinent remarks including mention of latest methods of diagnosis or of treatment, or of prevention. More space, from 4 to 10 pages each, is given to those diseases seldom observed in the United States, or so common in the underdeveloped countries that they would make up a major part of medical practice.

The arrangement is orderly, with bold face type indicating the Etiology and Epidemiology, Pathology, Clinical Course, Laboratory Findings, Differential Diagnosis, Prognosis, Treatment, and Prevention for each of the diseases taken up in detail. In most instances, the Clinical Course is expanded to include separate discussions of mild and severe cases, of initial and advanced stages, or of the different types of the disease. There are forty black and white photo reproductions illustrating the book, but these are concentrated in a few areas, mostly the bacterial and mycotic infections of the skin. Although there are no specific reference notes, foot notes,

WILLIAMS MORTUARY

"CHAPEL OF THE CHIMES"

1076 S. Beretania St., Phone 52-587 **Ample Parking Adjoining Mortuary**

OVER A CENTURY OF SERVICE

"Service measured not by gold but by the Golden Rule"

MEMBER

National Selected Morticians, National Funeral Directors Association,
Order of the Golden Rule, Hawaii Funeral Directors Association

or bibliography, several references are listed at the end of each of the main subdivisions as "Recommended Reading."

The Synopsis, by covering the field in 339 uncrowded small pages (the printed portions are 4 inches by 6 inches) is by its nature a much condensed package of information and has its chief value as a guide or pocket book for quick reference between patients. It does not replace the standard texts on tropical medicine which are more lengthy with historical backgrounds, and more illustrations, but take more time to study. It would, however, contain all the up-to-date information which one would expect to find in a shelf of recent year books.

IRA D. HIRSCHY, M.D.

★Obstetrics, 13th Ed.

By J. P. Greenhill, M.D., F.A.C.S., F.I.C.S. (Hon.), F.A.C.O.G., 1246 pp., $20.00, W. B. Saunders Company, 1965.

IN THIS MOST RECENT edition of Greenhill's Obstetrics, the text has been enlarged from 1053 pages to 1195 pages, covering 84 instead of 80 chapters. There are now 34 contributors as opposed to the previous 23. Seventeen new contributors have been added whereas five of the previous authors were not included in this newest effort.

The first chapter, entitled "Anatomy of Reproduction," is a concise, well-illustrated section newly added. Short chapters on the cervix uteri in pregnancy and fetal electrocardiography have been incorporated in this edition. The chapter on induction of labor and abortion has been rewritten to dwell on induction only, with the abortion section enlarged into two separate chapters on septic abortion and therapeutic abortion. The chapters on the cardiovascular system and blood dyscrasias have been

continued page 356

MEDICAL PLACEMENT BUREAU
and
NURSES' REGISTRY

24 HOUR SERVICE

LET US SERVE YOU IN YOUR NEED

Nurses, Staff and Office
Nurses, Private Duty
Nurses, Supervisors
Practical Nurses
Nurses, Aide
Dental Assistants
Physical Therapists
X-Ray Technicians
Laboratory Technicians
Medical Stenographers
Medical Clerks
Receptionists
Male Nurses
Bookkeepers
Home Companions

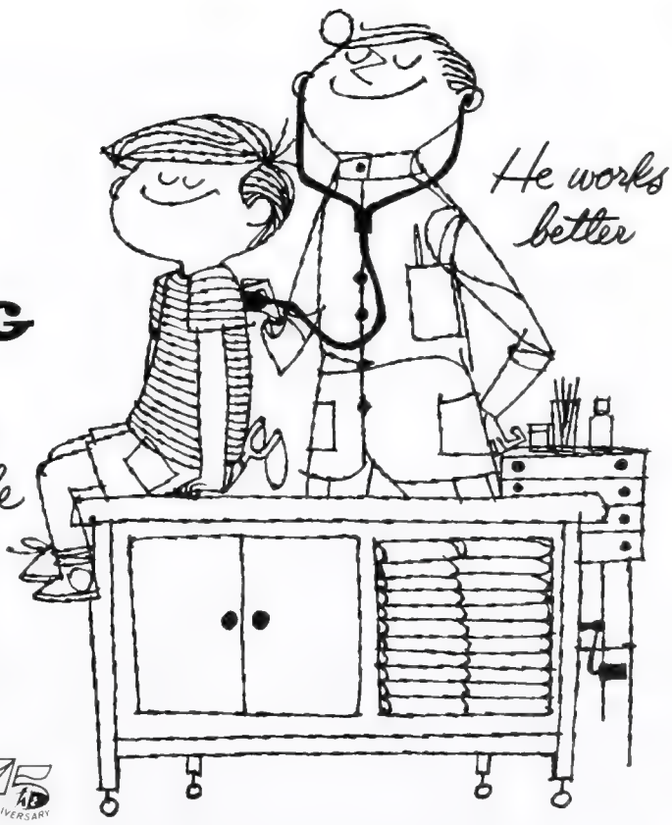
Frieda M. Beezley, R.N., *Director*
Patsy Harrison, *Secretary*

1473 South King St. **991-237**

Look what happens when you add

AIR CONDITIONING

He's more comfortable



Both heat and humidity are reduced to comfortable levels, so patients relax, doctors are more efficient. The office is cleaner, too, because the air is filtered. And air conditioning does it all.

HAWAIIAN ELECTRIC 75 ANNIVERSARY

CONSIDERING
CONTACT LENSES?

Here's Good News!

Newly perfected Micro thin lenses now provide:

- Shorter fitting time
- Greater comfort
- Reduced period of adjustment to lenses

We continue to offer highest quality and finest service for all your optical requirements.

GUILD OPTICIANS
OPTICAL DISPENSERS
of Hawaii, Inc.

Additional location at:

1133 BISHOP ST. **576-570**
312 ALA MOANA BLDG. **976-925**

redone by new contributors. Additional chapters on the Asherman Syndrome, human genetics, human cytogenetics, and contraception are now included. Curiously, the contraceptive chapter has been placed in the section on operative obstetrics when it perhaps would have been more appropriate in the section on physiology and conduct of the puerperium.

It is redundant to repeat the oft-stated feeling that each new revision is an improvement. This by no means reflects on the previous edition and its contributors for without it, there would be no new edition. A classic obstetrical text continues to be a classic.

MILLARD SETO, M.D.

★Surgery of the Biliary Passages and The Pancreas

By Walter Hess, M.D., translated from the German by Heinrich Lamm, M.D., F.A.C.S., 638 pp., $25.00, D. Van Nostrand Company, Inc., 1965.

THIS IS A SCHOLARLY, complete treatise on the technical aspects of surgery of the bile passages and pancreas. It is a reference book for the operating surgeon. It is prefaced by an academic section on the anatomy, physiology, and endocrinology of the above mentioned structures. It is profusely illustrated with photographs of roentgenograms and also with superb artists' drawings of anatomical structures and operative steps. The references are voluminous. This book is a credit to its author, a German surgeon of Zürich, and is a refreshing addition to the American references on the subjects covered. ■

C. S. JUDD, JR., M.D.

F I M
RESEARCH / EDUCATION / COUNSEL

Financial Management Institute

Management Methods For Professional People

1481 S. King Street **Honolulu, Hawaii 96814**
Professional Center Bldg.

WHAT SHOULD A GOOD BILLING SYSTEM PROVIDE?

IT SHOULD PROVIDE FOR THE PATIENT . . .

a FULLY ITEMIZED AND DESCRIPTIVE STATEMENT of account . . . PROMPTLY AND REGULARLY SUBMITTED . . . with TACTFUL REMINDERS OF OVERDUE BALANCES . . . plus an EASY REMITTANCE PROCEDURE.

FOR THE DOCTOR . . .

a 100% FINGER-TIP CONTROL over ACCOUNT RECEIVABLES . . . and CASH, . . . a complete DAILY FINANCIAL PICTURE, . . . the GREATEST POSSIBLE COLLECTION RETURN with GOOD PATIENT RELATIONS, . . . plus an ANALYSIS OF PROFESSIONAL SERVICES RENDERED.

FOR THE RECEPTIONIST . . .

a QUIET . . . COMPACT . . . EFFICIENT . . . ECONOMIC . . . and SIMPLIFIED SYSTEM . . . which gives MORE TIME TO ASSIST THE DOCTOR.

FOR THE ACCOUNTANT . . .

an AUTOMATICALLY PRODUCED, ERROR-FREE detail and summary information for EFFICIENT AUDITING and TAX REPORTING.

For Further Information at No Obligation Call 994-989

Doctor, Does Your Office Measure Up?

FOR EFFICIENT MANAGEMENT

YOU SHOULD HAVE . . . *our clients do!*

1. 95% return on receivables
2. Prompt professional statements
3. Prompt insurance claims
4. Daily management reports
5. Monthly aging analysis of receivables
6. Monthly cash recap
7. Monthly service analysis

we can tell you *YOU* SHOULD KNOW

1. How much money is owed you now?
2. Your % return on receivables?
3. If your receivables are out of balance with charges?
4. Your monthly income loss from management under your present system?

FREE diagnosis of *your* present system is as close as your telephone . . .

Professional Services

CALL US NOW!

567-737

1350 So. King St., Honolulu

Personalized Services for Professional People is our Specialty

Our "Angels"

	Page
American Factors, Ltd.	296
American Tobacco Co	301
Ames Company, Inc.	359
Ayerst Laboratories	360
Bishop Trust Company	307
Bristol Laboratories	292, 293, 340, 341
Burroughs-Wellcome & Co. (U.S.A.), Inc	299, 351
Carnation Company	303
Ciba Pharmaceutical Co.	297
Coca-Cola Cottling Co. of Honolulu	346
Cutest Uniforms	346
Financial Management Institute	356
Geigy Pharmaceuticals	302
General Diagnostics	343
Hawaii Medical Service Association	300
Hawaiian Electric Co.	355
Island Holidays	345
Kahanaola	342
Kaimuki Center	287
Lederle Laboratories, Inc.	289
Lilly, Eli, & Co.	285, 308
Mead Johnson Laboratories	348, 349
Medical Placement Bureau	355
O'Leary, Lydia, of Hawaii	350
Optical Dispensers of Hawaii, Inc.	356
Parke, Davis & Co.	286
Pitman-Moore Company	294, 295
Professional Services	357
Roche Laboratories	347
Schuman Carriage Co., Ltd.	358
Searle, G. D., & Co.	304, 305
Sheraton Hawaii	291
Squibb, E. R., & Sons	306
Wallace Laboratories	352, 353
Williams Mortuary	354



For courtesy demonstrator at your home or office, call 506-211

On display at **SCHUMAN'S**
1234 South Beretania St.

May-June, 1966

U.C. MEDICAL CENTER LIBRARY
JUN
San Francisco 22

HAWAII MEDICAL JOURNAL



In this issue

Battered Child Syndrome

Child Abuse in Hawaii

Table of Contents, page 366

Hawaii Calendar, page 425

VOLUME 25 • NUMBER 5

INDICATIONS: Grand mal epilepsy and certain other convulsive states.

PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced.

SIDE EFFECTS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Upon discontinuation of therapy eruptions usually subside. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Hematologic disorders, including megaloblastic anemia, leukopenia, granulocytopenia, pancytopenia, and aplastic anemia have been reported. Nystagmus may develop.

DILANTIN is supplied in several forms including Kapseals containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232



The color combinations of the banded capsules are Parke-Davis trademarks.

75965

the epileptic...talent in eclipse or fulfillment of potential?

the difference is often

Kapseals®

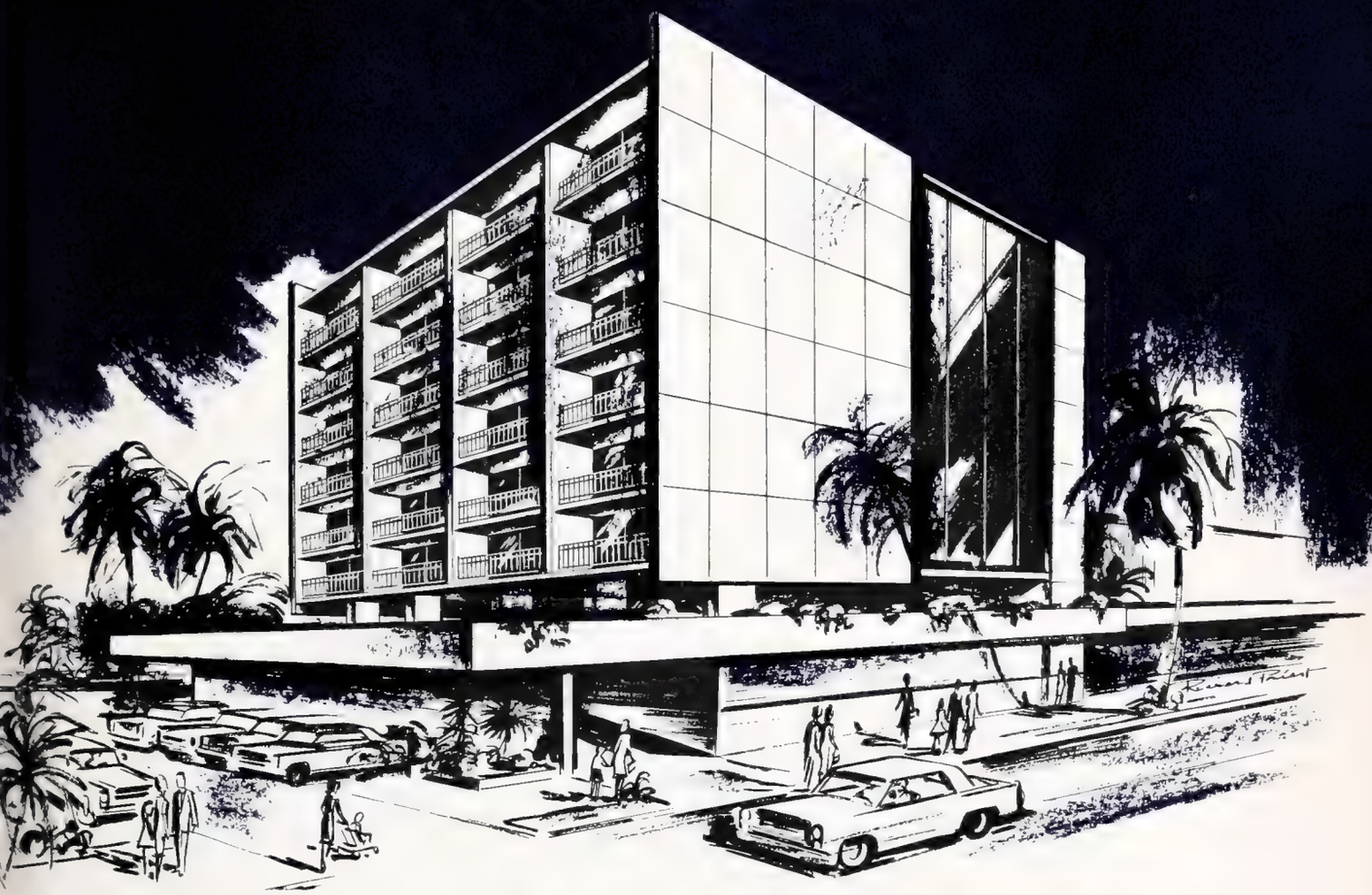
Dilantin®

(diphenylhydantoin sodium)

PARKE-DAVIS



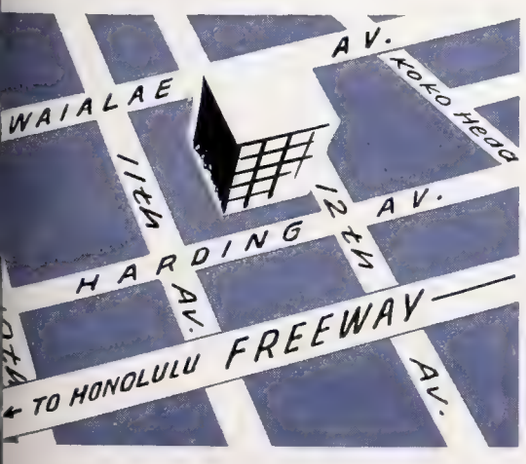
KAIMUKI'S FIRST MEDICAL AND PROFESSIONAL CONDOMINIUM



THE KAIMUKI CENTER

℞ A Prescription for All Doctors

LOW COST: You buy a suite for as little as $40.00 a square foot. Monthly loan and expense payments start at 26¢ a square foot • EQUITY GROWTH: with loan payments • APPRECIATION: Kaimuki is a leading area in property appreciation • RESALE: Excellent for capital gain, on retirement, or on sale of your practice, or to add to your estate • RENTAL: A source of continuing income • CAPITAL: Refinancing can produce principal funds for further investment • SECURITY: What you are presently paying as rent will buy security for your family • MAXIMUM FINANCING: 20 year mortgage loans for 70% of purchase price are available, as are second mortgages up to 20%.



60 year lease, with 25 year fixed rental.
Tenant Parking—one for one included in purchase price.
Customer Parking — 250 adjacent Municipal parking stalls. 110 additional Municipal parking stalls within one block.
Bus Service only ½ block away.

Carpets or Floor Tile.
Drapes.
Finished Floors.
Suspended Ceilings.
Central Air-Conditioning.
High Speed Elevator Service.
Freeway Entrance—1 block. Freeway Exit—2 blocks.

Location: 1120 Twelfth Avenue, Kaimuki — 2 short blocks from the new freeway exit and an estimated 10 minutes from Waikiki, Ala Moana and downtown Honolulu.

For Sales Information Contact:

BUSINESS INVESTMENT, LTD.

SUITE 1416, ALA MOANA BUILDING, HONOLULU • PHONE 90-948

a LANKA KAI development

HAWAII MEDICAL JOURNAL

Published Bi-Monthly by the HAWAII MEDICAL ASSOCIATION (Incorporated in 1856 under the Monarchy), 510 S. Beretania St., Honolulu, Hawaii 96813 • *Editor,* HARRY L. ARNOLD, JR., M.D. • *News Editor,* HENRY N. YOKOYAMA, M.D. • *Managing Editor,* LEE MCCASLIN

VOLUME 25, NUMBER 5 • MAY-JUNE, 1966 • $6.00 A YEAR, $1.00 A COPY

The Hawaii Medical Association

Officers 1965-1966

President • THEODORE T. TOMITA, *Honolulu*
President-Elect • B. A. RICHARDSON, *Honolulu*
Past President • O. D. PINKERTON, *Honolulu*
Secretary • R. VARIAN SLOAN, *Honolulu*
Treasurer • HERBERT Y. H. CHINN, *Honolulu*

County Presidents

Hawaii County • ED B. HELMS, *Hilo*
Honolulu County • JOHN J. LOWREY, *Honolulu*
Kauai County • Y. MIYASHIRO, *Waimea*
Maui County • KENNETH HALING, *Kahului*

Delegate to A.M.A. • RICHARD D. MOORE, *Honolulu*
Alt. Delegate to A.M.A. • GEORGE H. MILLS, *Honolulu*

Councillors 1965-1966

Maui • JOSEPH E. ANDREWS
Honolulu • GROVER H. BATTEN
Honolulu • BERNARD W. D. FONG
Honolulu • ANDREW C. IVY, JR.
Hawaii • ROBERT M. MIYAMOTO
Kauai • SAMUEL R. WALLIS

Officers—County Societies—1966

HAWAII		HONOLULU
ED B. HELMS •	President	• JOHN J. LOWREY
ETTA WRIGHT BEST •	Vice President	• GEORGE H. MILLS
CHARLES H. BELCHER •	Secretary	• KEITH F. O. KUHLMAN
PAUL CALDWELL •	Treasurer	• HERBERT Y. H. CHINN

KAUAI		MAUI
Y. MIYASHIRO •	President	• KENNETH HALING
SAMUEL WALLIS •	Vice President	• BILLIE FERN STROTHER
JOHN DE LA SALLE MORRIS •	Secretary / Treasurer	• SAKAE UEHARA

The JOURNAL may not be held responsible for opinions expressed in papers, discussions, communications, or advertisements. The advertising policy of the HAWAII MEDICAL JOURNAL is governed by the rules of the Council on Drugs of the American Medical Association. The right is reserved to reject material submitted for editorial or advertising columns. All material for publication must be in the hands of the editor on or before the 10th day of the month preceding publication date. Reprints of original articles will be supplied at actual cost, provided request is attached to manuscript or made in sufficient time before publication. A reasonable number of cuts and illustrations accompanying an article will be accepted for printing. The right is reserved to ask the author to bear cost of these when it is found necessary to do so.

Copyright, 1966, by the Hawaii Medical Association, Honolulu, Hawaii. Entered as second class matter, October 17, 1941, at the Post Office in Honolulu, Hawaii, under the Act of August 24, 1912. Office of Publication: Mabel L. Smyth Memorial Building, 510 S. Beretania St., Honolulu, Hawaii 96813.

Take us for granted.

Should you have to worry about slow delivery service?
Or stock shortages? Never. Not if we can help it. Our job
... our duty ... indeed our sacred trust is to back you up
with service so dependable you can take us for granted.



Charles Malang
MANAGER



Johnny Kawafuchi
Sales Manager



Kenny Hills
Salesman—Oahu



Frankie Fernandez
Salesman—Oahu



Hideo Kawabata
Salesman—Oahu



Bill Lindsey
Salesman—Oahu



Masaaki Sasaki
General Sales
—Hawaii



Yoriyoshi Hara
Salesman—Hawaii



Christine Oga
Inside Sales
—Oahu



Edna Sato
Inside Sales
—Oahu



Doris Uyeda
Inside Sales
—Oahu



Elizabeth Azevedo
Inside Sales
—Oahu



George Pereira
Buyer



Eileen Brenessel
Secretary



Charlie Freitas
Warehouseman



Donald Hangai
Warehouseman



Hans Yoshino
Warehouseman



Shiro Sodetani
Warehouseman

Applicators / Desenex / Drug Envelopes / Ether / Lysol / Mazon / Ointment Tins

Arbrook
Ames Co., Inc.
Alcon Laboratories
Allergan Pharmaceutical
Astra Pharm. Products, Inc.
Ayerst Laboratories, Inc.
Bard-Parker
Barnes-Hind Laboratories
Becton-Dickinson & Company
Beutlich, Inc.
Bristol Laboratories
Brockway Glass Company
Burroughs Wellcome & Co.
Ciba Pharmaceutical Prod., Inc.
Dalton, Edward
Davis & Geck Sutures
Drug Package Inc.
Eastman Kodak
Eaton Laboratories
Endo Laboratories
Ethicon Inc.
Fellows-Testagar
Hynson, Westcott, Dunning
Invenex Pharmaceuticals
Johnson & Johnson
Kirkman Pharmacal Company
Lederle Laboratories
Mallinckrodt
McNeil Laboratories
Mead-Johnson & Company
Merrell, William S.
Milex Products
Minnesota Mining & Mfg.
Obergfel
Organon, Inc.
Ortho Pharmaceutical Corp.
Pacific Paper Products
Pfizer Laboratories
Pitman-Moore
Ray-O-Vac Company
Riker Laboratories, Inc.
A. H. Robins Co., Inc.
Roche Laboratories
J. B. Roerig & Company
Sauter Laboratories
Schering Corp.
The Scholl Mfg. Co., Inc.
Searle & Co., G. D.
Smith, Kline & French Lab.
Stanlabs, Inc.
Strong Cobb Arner
Tampax Inc.
Tidi Products
Travenol—Hilo
Vestal Laboratories, Inc.
Wallace Laboratories
Warner-Chilcott Lab.
Warren-Teed Pharmaceuticals
Westwood Pharmaceuticals
Winthrop Products, Inc.

Osyl / Rx Bottles / Rx Files / Pill Boxes / Tongue Blades / X-Ray Films & Supplies

SAME-DAY DELIVERIES SCHEDULED RURAL DELIVERIES

Phone 585-531 between 7:30 a.m. and 4:30 p.m. weekdays.

AMFAC INC DRUG DEPARTMENT

HAWAII MEDICAL JOURNAL

Contents

Volume 25, Number 5, May-June, 1966

Articles

Further Examples of Anti-V and Anti-VS Group Antibodies Found in the Honolulu Area 385
Mitsuo Yokoyama, M.D., Edith G. Eckstein, MT(ASCP), and Max Bowman, MT(ASCP)

The Battered Child "Syndrome" A Review 387
Captain Fred M. Nomura, MC, USA

Child Abuse in Hawaii 395
Major Peter H. Patterson, MC, and Donald Char, M.D.

Abdominal Aneurysm: Graft Replacement vs. Nonsurgical Therapy 398
Edward K. Lau, M.D., and Richard K. S. Pang, M.D.

Editorials

Parameter 402

Dispensing the Sample 402

Features

Book Reviews 412

County Society Reports 410

Hawaii Academy of General Practice 404

Hawaii Calendar 428

Hawaii Medical Association 411

In Memoriam—Doctors of Hawaii—LXI 406

New Members 408

Notes and News 414

Perinatal Death Study 405

This Is What's New! 403

Hawaii Technologists' Bulletin

Problems in Continuing Education Illustrated by a Field Training Institute Held in Samoa 418



save on taxes later!

If you are concerned about your family's financial future — how best to conserve money you are making now for their future use — you should read "Taxes and the Professional Man."

Written especially for professional men, it explains important aspects of Federal estate and gift taxes. How they may be minimized by sound planning. How trusts may serve your purposes. How the professional man who works for a corporation or institution should plan. Examples are included.

For a copy of "Taxes and the Professional Man," just write or call:

60 ANNIVERSARY 1906 1966

BISHOP TRUST COMPANY

Trust Services Exclusively

BISHOP AND KING STREETS · PHONE 563-771 ■

ONLY 20 MINUTES FROM
DOWNTOWN HONOLULU . . .

KAHANAOLA

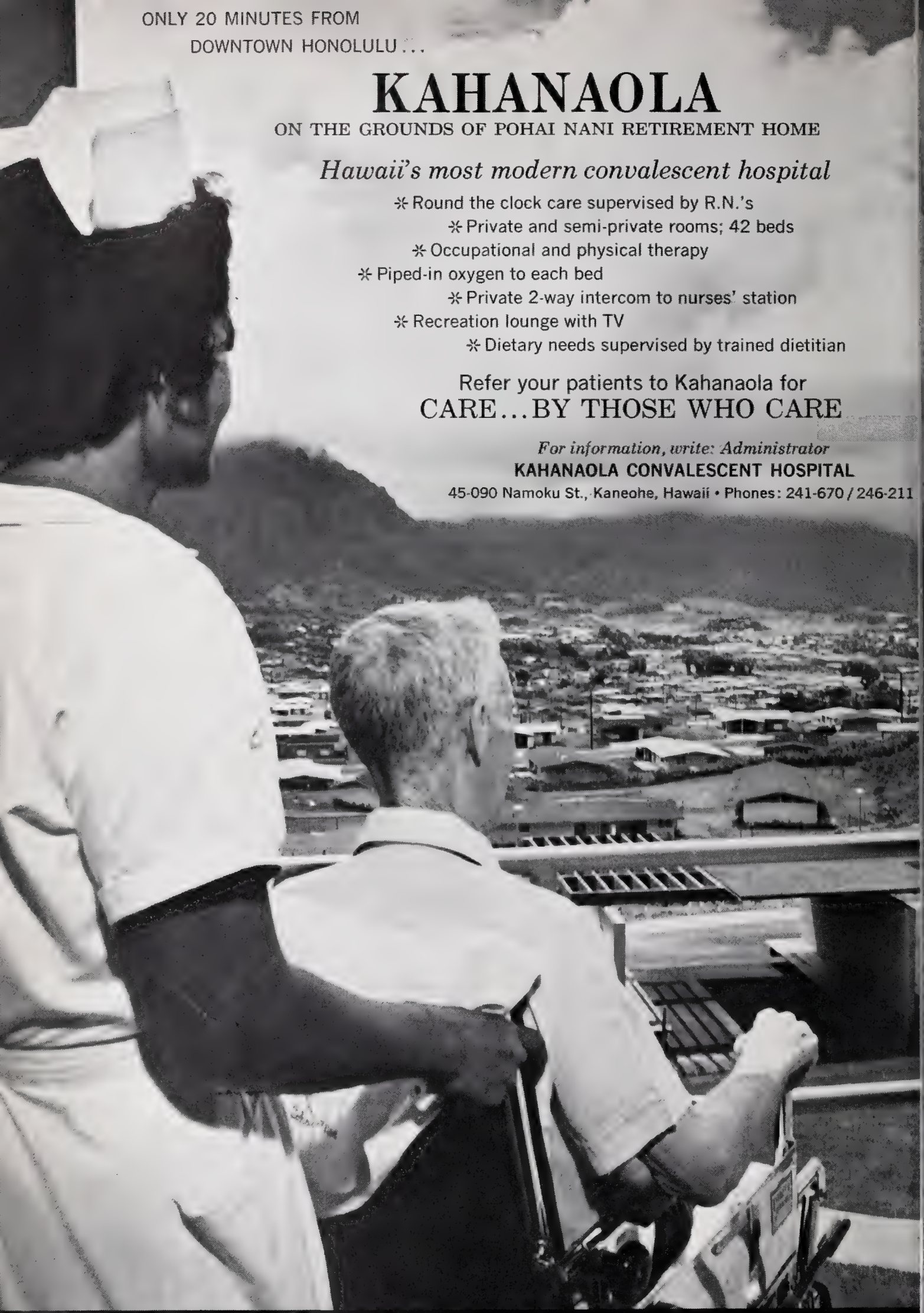
ON THE GROUNDS OF POHAI NANI RETIREMENT HOME

Hawaii's most modern convalescent hospital

- Round the clock care supervised by R.N.'s
- Private and semi-private rooms; 42 beds
- Occupational and physical therapy
- Piped-in oxygen to each bed
- Private 2-way intercom to nurses' station
- Recreation lounge with TV
- Dietary needs supervised by trained dietitian

Refer your patients to Kahanaola for
CARE . . . BY THOSE WHO CARE

For information, write: Administrator
KAHANAOLA CONVALESCENT HOSPITAL
45-090 Namoku St., Kaneohe, Hawaii • Phones: 241-670 / 246-211



ENDORSED BY: American Hospital Assoc. / Hawaii State Nursing Home Assoc. / Hospital Assoc. of Hawaii
American Nursing Home Assoc.

APPROVED FOR PAYMENT BY HAWAII MEDICAL SERVICE ASSOC.



The Pain Is Gone

Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

This is the new, everyday penicillin for common bacterial respiratory infections...



10:38 A.M.

10:05 A.M.







10:42 A.M.



11:00 A.M.



11:20 A.M.



11:47 A.M.



12:01 P.M.

1:15 P.M.

...with extra therapeutic coverage at no extra cost

Clinical success

Tegopen (sodium cloxacillin monohydrate) assures you a high degree of clinical success against respiratory infections. A recent comprehensive analysis of office patients administered the drug proves the point: *96% of 259 bacterial respiratory infections treated were cured or improved.*[1]

Kills all common respiratory Gram-positive cocci

In contrast to the Gram-positive spectrum of penicillins G and V, Tegopen (sodium cloxacillin monohydrate) destroys strep, pneumo and virtually *all* staphylococci.

Bactericidal in action

Tegopen (sodium cloxacillin monohydrate) is always bactericidal, killing the offending organism. Erythromycin[2] and triacetyloleandomycin[3] are essentially bacteriostatic agents which merely suppress bacterial growth.

Exceptionally well tolerated

There is little likelihood of dose-related toxicity with Tegopen (sodium cloxacillin monohydrate).

Low in cost

Even with all of its extra advantages, Tegopen (sodium cloxacillin monohydrate) is priced comparably to penicillins G and V, and 33% less than either erythromycin or triacetyloleandomycin.

BRISTOL THERAPEUTIC SUMMARY: For complete information, consult Official Package Circular. *Indications:* Infections due to streptococci, pneumococci and staphylococci, particularly penicillin G-resistant strains of the latter. *Contraindications:* A history of severe allergic reactions to penicillins. *Precautions:* Typical penicillin-allergic reactions may occur, particularly in hypersensitive persons. Mycotic or bacterial infections may occur. Safety for use in pregnancy is not established. Assess renal, hematopoietic and hepatic function periodically during long-term therapy. *Adverse Reactions:* Nausea, epigastric discomfort, flatulence, diarrhea, eosinophilia, and allergic manifestations. Moderate SGOT elevations have been noted. *Usual Dosage:* Adults: 250 mg. *q.* 6 *h.* Children: 50 mg./Kg./day. Children weighing more than 20 Kg. should be given the adult dose. Treat beta-hemolytic streptococcal infections for at least 10 days. Administer 1 to 2 hours before meals. *References:* 1. Data on file at Bristol Laboratories. 2. Geraci, J.E. (Panel Discussion, M. Finland, Moderator): Antibiot. Ann. 1958–59: 1051, 1959. 3. Thompson, W.T., Jr.: South. M. J. *56*:844 (Aug.) 1963.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co., Syracuse, New York

IN TONSILLITIS • PHARYNGITIS • OTITIS MEDIA • SINUSITIS • BRONCHITIS • PNEUMONITIS

new TegoPen®
SODIUM CLOXACILLIN MONOHYDRATE



Butazolidin® alka

phenylbutazone	100 mg.
dried aluminum hydroxide gel	100 mg.
magnesium trisilicate	150 mg.
homatropine methylbromide	1.25 mg.

In rheumatoid arthritis—effective thera with minimal chance of G-I upset

Therapeutic Effects
Fifty to 75% of patients obtain major relief of arthritic symptoms, as reported by numerous clinicians. In addition, the problem of gastric upset—a major problem with certain other oral antiarthritic agents—is minimized by the presence of antacids and an antispasmodic in the formulation.

Improvement is generally seen within 3 to 4 days, and trial therapy need not be continued beyond a week. Relief of pain is followed quickly by resolution of inflammation and improved joint function. Relief of symptoms is often accompanied by increased appetite, gain in weight and an improved sense of well-being.

The initial response is usually maintained without dosage increases; indeed, initial dosage is often reduced for maintenance purposes.

Salicylate or steroid therapy can usually be diminished or, in some instances, eliminated.

Contraindications
Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should not be given when the patient is senile or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Precautions
Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time.

Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Adverse Reactions
The most common adverse reactions are nausea, edema and drug rash. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reaci have been reported but cannot definit attributed to the drug. Thrombocytop purpura and aplastic anemia are also sible side effects. Confusional states, agitation, headache, blurred vision, o neuritis and transient hearing loss ha been reported, as have hepatitis, jaun and several cases of anuria and hema With long-term use, reversible thyroid hyperplasia may occur infrequently.

Average Dosage in Rheumatoid Arthr
Initial: 3 to 6 capsules daily in divided It is usually unnecessary to exceed 4 c sules daily. A trial period of 1 week is a quate to determine response; in the ab of favorable response, discontinue.

Maintenance: An effective level is ofte achieved with 1 to 2 capsules daily; do exceed 4 daily.

Also available:
Butazolidin®, phenylbutazone
Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporati
Ardsley, New York

Geigy





one mid-morning **one mid-evening**

New 300 mg tablet It's made for b.i.d.

For Adults–2 tablets provide a full 24 hours of therapy...with all the extra benefits of DECLOMYCIN...lower mg intake per day...proven potency... 1-2 days' "extra" activity to protect against relapse or secondary infection.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
300 mg FILM COATED TABLETS

Effective in a wide range of everyday infections —respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of discomfort.

Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncracy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg of demethylchlortetracycline HCl.

Tablets: film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

674-6—3838

LIFETIME FINANCIAL MANAGEMENT

GIVE YOUR PLANNING PROGRAM A HEALTH ✔ NOW!
. . . DON'T WAIT UNTIL IT BECOMES A TERMINAL CASE!

Call 994989

VITAL PLANNING AREAS	PLANNING STAGES			
	FINANCIAL PROGRAMMING & FORECASTING	TIMETABLE FOR ACHIEVEMENT	METHOD OF CONTROL	REVIEW
1. DISTRIBUTION OF INCOME & EXPENSE				
2. PERSONAL NET WORTH				
3. ESTATE CONDITION				

COMPARE THESE FEATURES . . .

- **ALL FINANCIAL DATA IN ONE CONVENIENT PLACE!**
- **CO-ORDINATED INVESTMENTS FOR GREATER EFFECT!**
- **INTERPRETIVE ANALYSIS FOR IMMEDIATE ACTION!**

HIGH EARNINGS ALONE ARE NOT THE KEY TO FINANCIAL INDEPENDENCE.

F M I — RESEARCH / EDUCATION / COUNSEL

Financial Management Institute

Management Methods For Professional People

1481 S. King Street **Honolulu, Hawaii 96814**

Phone 994-989



THE NEW 1966 CADILLAC COUPE DE VILLE

For courtesy demonstrator at your home or office, call 506-211

***On display at* SCHUMAN'S**

1234 South Beretania St.

SCHUMAN 1895



ECONOMY

When you prescribe or recommend Allbee with C, you can be sure your patient is getting a rational, specific multivitamin formulation at an economical price. The potent formula is sensible and simple. It contains therapeutic amounts of the water-soluble B and C vitamins. These vitamins are expended rapidly in the body and need to be replenished frequently. There are no extraneous factors, no frills in Allbee with C. It's the no-nonsense vitamin in the yellow and green capsule that always gives your patient his money's worth.

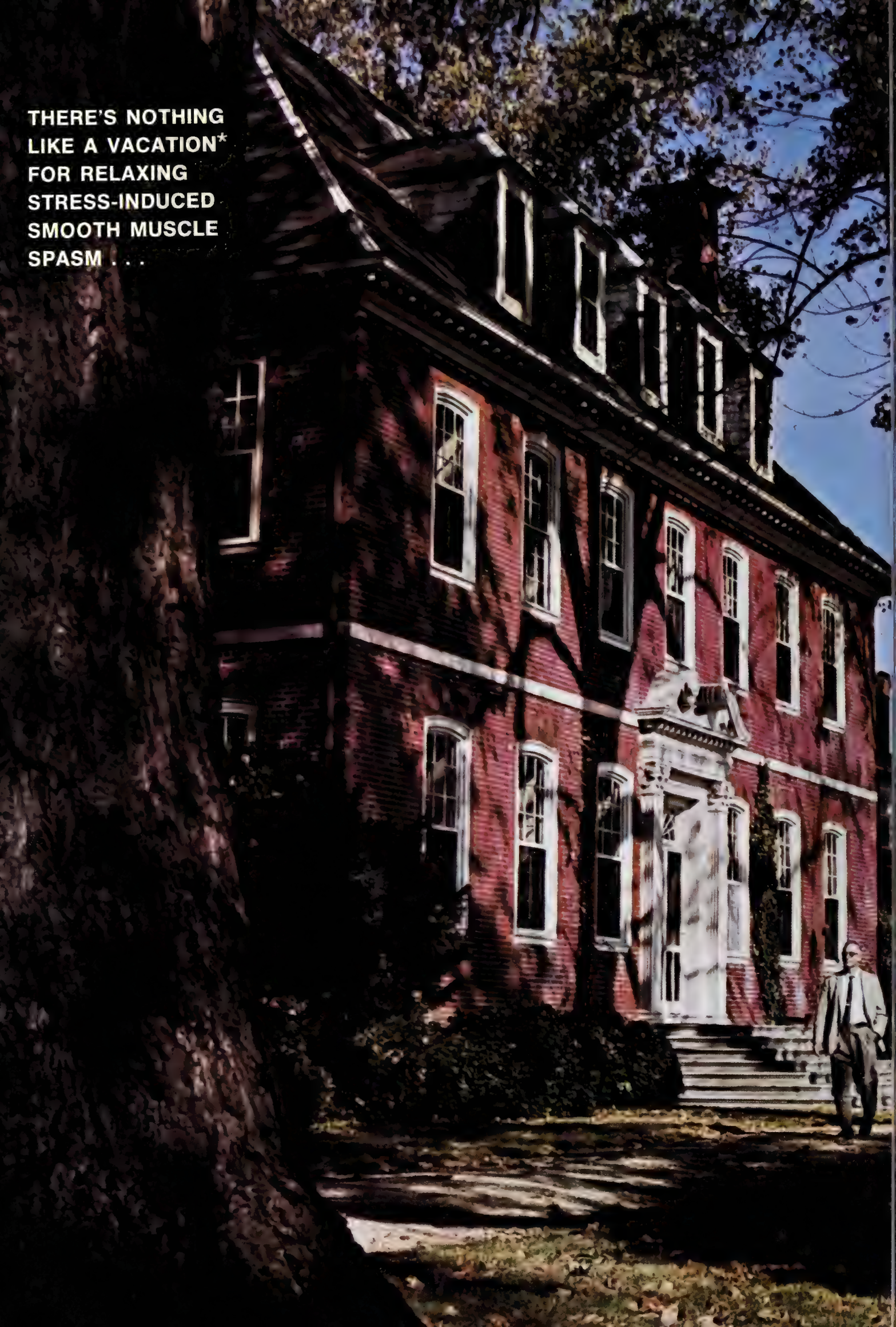
Each capsule contains: Thiamine mononitrate (B_1), 15 mg.; Riboflavin (B_2), 10 mg.; Pyridoxine hydrochloride (B_6), 5 mg.; Nicotinamide, 50 mg.; Calcium pantothenate, 10 mg.; Ascorbic acid (vitamin C), 300 mg.

A. H. ROBINS COMPANY, INC.,
RICHMOND, VIRGINIA 23220

A·H·ROBINS

—a good reason for

ALLBEE® WITH C


THERE'S NOTHING
LIKE A VACATION*
FOR RELAXING
STRESS-INDUCED
SMOOTH MUSCLE
SPASM . . .

. NOTHING, THAT IS,
EXCEPT THE SEDATIVE-ANTISPASMODIC
BENEFITS OF

DONNATAL®

There's nothing quite like a vacation to ease the pressures of the modern, "workingday" world. And for the patient who can't get away from it all, there's nothing quite like Donnatal to relax stress-induced smooth muscle spasm. For 31 years it has been the antispasmodic-sedative most often prescribed for relieving functional disturbances of tone and motility of the gastrointestinal tract.

belladonna alkaloids in optimally balanced ratio

In Donnatal, natural belladonna alkaloids are rationally balanced in a specific, fixed ratio that provides "the greatest efficacy with the smallest possible dose."[1] They avoid the clinical uncertainties of the variable tincture and extract of belladonna, and are considered superior in range of action to atropine alone.[2] Furthermore, they are generally recognized as being more effective than the synthetics for relieving visceral spasm.

phenobarbital for sedation

Years of clinical use have established phenobarbital as one of the most efficient and highly regarded sedatives. In fact, for general sedation it is the drug of choice.[3] In Donnatal, phenobarbital potentiates the spasmolytic effects of the belladonna alkaloids, lessening emotional tensions and checking the neurogenic impulses that trigger GI disorders.

more than 24 indications in PDR

Donnatal has withstood the test of time to become the classic sedative-antispasmodic because of its unsurpassed effectiveness, safety, economy, uniformity of composition, and dosage convenience. Its widespread acceptance and usage by the profession can also be attributed to its versatility in treating disorders characterized by smooth muscle spasm. There are more than two dozen distinct and separate indications for Donnatal listed in the current PDR.

IN EACH TABLET, CAPSULE, OR (5 cc.) OF ELIXIR

hyoscyamine sulfate	0.1037 mg.
atropine sulfate	0.0194 mg.
hyoscine hydrobromide	0.0065 mg.
phenobarbital	(1/4 gr.) 16.2 mg.

(warning: may be habit forming)

IN EACH EXTENTAB

hyoscyamine sulfate	0.3111 mg.
atropine sulfate	0.0582 mg.
hyoscine hydrobromide	0.0195 mg.
phenobarbital	(3/4 gr.) 48.6 mg.

(warning: may be habit forming)

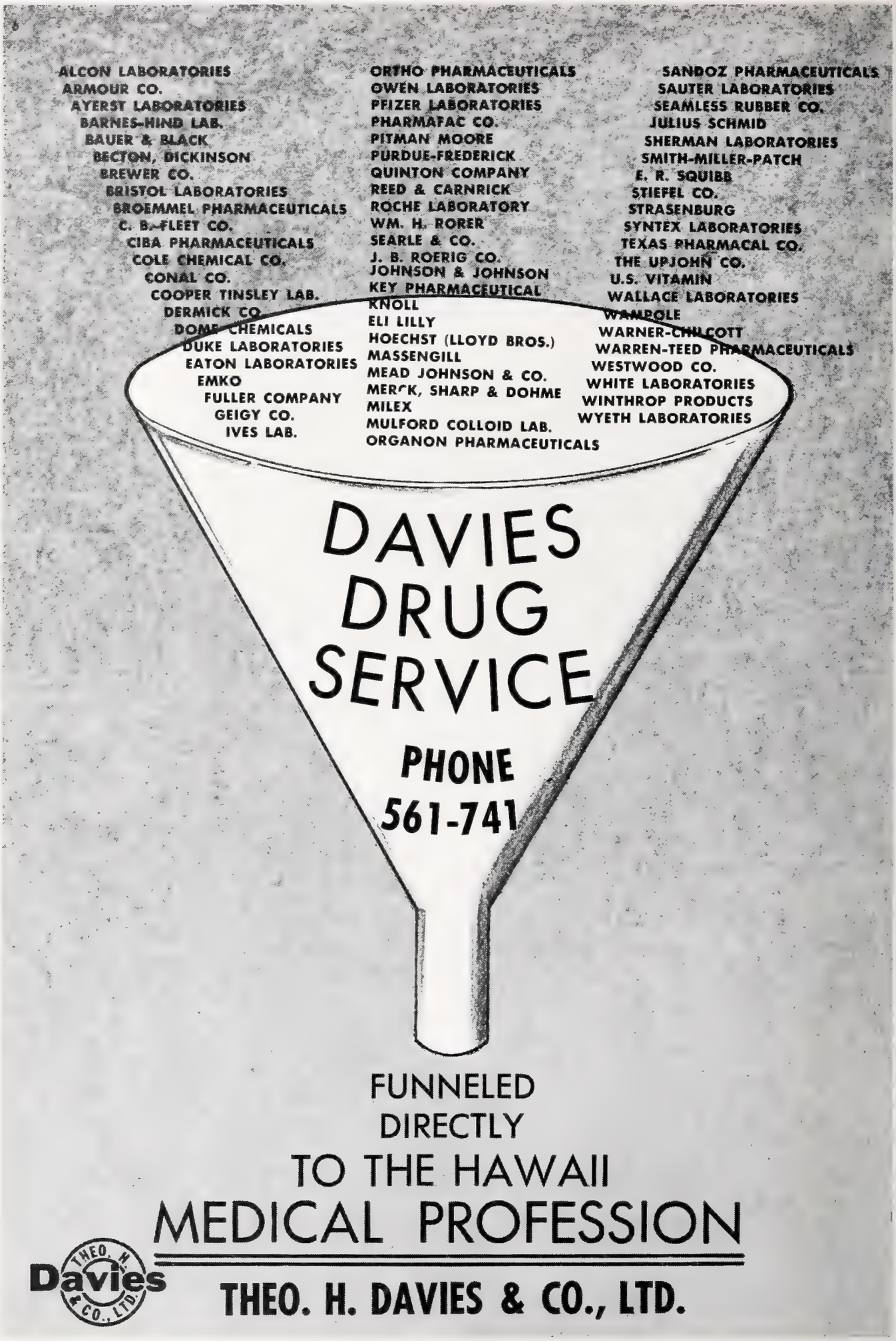
BRIEF SUMMARY: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma, or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease, or a hypersensitivity to any of the ingredients.

REFERENCES: 1. Vollmer, H.: Arch. Neurol. and Psychiat., 43:1057, 1940. 2. Morrissey, J.H.: J. Urology, 57:635, 1947. 3. Krantz, J.C., Jr., and Carr, C.J.: Pharmacological Principles of Medical Practice, 2nd ed., Baltimore (1954), 552.

*This one at Westover, elegant Colonial Virginia plantation, located on the James River near Richmond. Built in the early 1730's by William Byrd II, founder of Richmond, it is now the home of Mrs. Bruce Crane Fisher.

A. H. ROBINS COMPANY, INC., RICHMOND, VA.

A·H·ROBINS


ALCON LABORATORIES
ARMOUR CO.
AYERST LABORATORIES
BARNES-HIND LAB.
BAUER & BLACK
BECTON, DICKINSON
BREWER CO.
BRISTOL LABORATORIES
BROEMMEL PHARMACEUTICALS
C. B.-FLEET CO.
CIBA PHARMACEUTICALS
COLE CHEMICAL CO.
CONAL CO.
COOPER TINSLEY LAB.
DERMICK CO.
DOME CHEMICALS
DUKE LABORATORIES
EATON LABORATORIES
EMKO
FULLER COMPANY
GEIGY CO.
IVES LAB.
ORTHO PHARMACEUTICALS
OWEN LABORATORIES
PFIZER LABORATORIES
PHARMAPAC CO.
PITMAN MOORE
PURDUE-FREDERICK
QUINTON COMPANY
REED & CARNRICK
ROCHE LABORATORY
WM. H. RORER
SEARLE & CO.
J. B. ROERIG CO.
JOHNSON & JOHNSON
KEY PHARMACEUTICAL
KNOLL
ELI LILLY
HOECHST (LLOYD BROS.)
MASSENGILL
MEAD JOHNSON & CO.
MERCK, SHARP & DOHME
MILEX
MULFORD COLLOID LAB.
ORGANON PHARMACEUTICALS
SANDOZ PHARMACEUTICALS
SAUTER LABORATORIES
SEAMLESS RUBBER CO.
JULIUS SCHMID
SHERMAN LABORATORIES
SMITH-MILLER-PATCH
E. R. SQUIBB
STIEFEL CO.
STRASENBURG
SYNTEX LABORATORIES
TEXAS PHARMACAL CO.
THE UPJOHN CO.
U.S. VITAMIN
WALLACE LABORATORIES
WAMPOLE
WARNER-CHILCOTT
WARREN-TEED PHARMACEUTICALS
WESTWOOD CO.
WHITE LABORATORIES
WINTHROP PRODUCTS
WYETH LABORATORIES
DAVIES
DRUG
SERVICE
PHONE
561-741
FUNNELED
DIRECTLY
TO THE HAWAII
MEDICAL PROFESSION
Davies
THEO. H. DAVIES & CO., LTD.



Tareyton...with the taste worth fighting for

America's largest-selling charcoal-tip cigarette

©The American Tobacco Company


SAXON

A common cold! I thought everything was a "virus" these days.

Although he'd prefer a more exotic name for it, you know he's suffering from an ordinary, old common cold. And, he's congested. He'll breathe easier when you prescribe Novahistine LP.

Two long-acting tablets in the morning and two in the evening will provide around-the-clock relief by helping to keep congested air passages clear, thus enabling your cold patient to enjoy normal and free breathing. This action of long-acting Novahistine LP helps restore normal mucus secretion and ciliary activity—physiologic defenses against infection of the respiratory tract.

Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Tell patients who operate machinery or motor vehicles that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

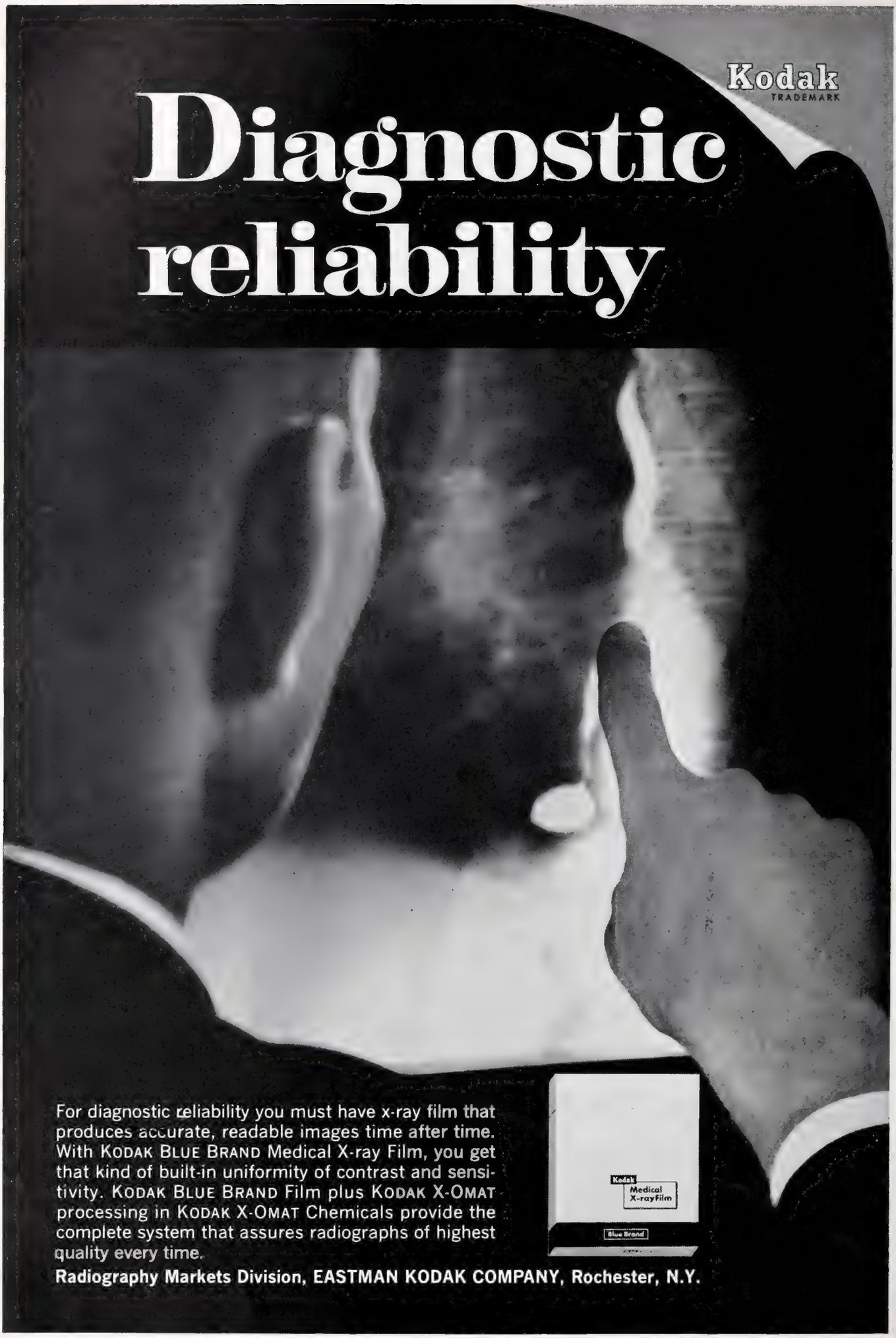
For relief of nasal congestion.

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis



Kodak
TRADEMARK

Diagnostic reliability



For diagnostic reliability you must have x-ray film that produces accurate, readable images time after time. With KODAK BLUE BRAND Medical X-ray Film, you get that kind of built-in uniformity of contrast and sensitivity. KODAK BLUE BRAND Film plus KODAK X-OMAT processing in KODAK X-OMAT Chemicals provide the complete system that assures radiographs of highest quality every time.

Radiography Markets Division, EASTMAN KODAK COMPANY, Rochester, N.Y.



a good night's sleep with

Doriden® (glutethimide CIBA)

Doriden is particularly suitable for hypertensive patients with insomnia for, unlike barbiturates, it has virtually no effect on pulmonary or kidney function. It rarely, if ever, causes respiratory depression. Doriden is well tolerated by the chronically ill—may even be prescribed for hypertensives with renal involvement.

The "healthy" patient with insomnia, as well as those who are sick, will benefit from the ability of Doriden to induce sound sleep quickly with virtually no pre-excitation. With Doriden, patients can expect a good night's sleep and awake refreshed—usually free from barbiturate-like "hangover."

INDICATIONS AND DOSAGE: *Insomnia*—0.5 Gm at bedtime. *Preoperative Sedation*—0.5 Gm the night before surgery; 0.5 to 1 Gm 1 hour before anesthesia. *Obstetric Sedation*—0.5 Gm at onset of labor. Continuing total daily dosage over 1 Gm is not recommended. CAUTION: Supervise dosage carefully, especially in patients with a known propensity for overdosing. Excessive and prolonged use in susceptible persons (*e.g.*, alcoholics, former addicts, severe psychoneurotics) may result in dependence and withdrawal reactions such as nausea, abdominal discomfort, tremors, or convulsions. Newborns of mothers dependent on glutethimide may exhibit withdrawal symptoms. SIDE EFFECTS: Occasionally, a skin rash may occur; if so, withdraw drug. The rash usually clears spontaneously in 2 or 3 days. Occasionally nausea also occurs. Rarely, acute hypersensitivity reactions and blood dyscrasias have been associated with glutethimide therapy. SUPPLIED: *Tablets,* 0.5 Gm (white, scored) and 0.25 Gm (white, scored); bottles of 100, 500 and 1000. *Tablets,* 0.125 Gm (white); bottles of 100. *Capsules,* 0.5 Gm (blue and white); bottles of 100 *Consult complete literature before prescribing* CIBA Pharmaceutical Company, Summit, N.J.



C I B A Summit, N. J. 2/3436 MBM

Carnation
EVAPORATED MILK



1965
Carnation Healthy Baby Contest
$1,000 1st prize winner,
Laurie Anne Medeiros
of Honolulu, Hawaii

HAWAII'S HEALTHY BABY MILK...

1st CHOICE FOR INFANT FEEDING...
No. 1 in the Islands for generations,
...available everywhere in Hawaii

"from Contented Cows"

The weight of clinical evidence favors Librium

With Librium (chlordiazepoxide HCl), the weight of a five-year record of efficacy and safety in clinical use is supported by over 630 reports in the medical literature. Its virtually specific antianxiety action normally reduces disturbing emotional complaints promptly without compromising the patient's mental alertness or ability to perform normal functions. Decisive results are often seen in patients who had not improved on previously used psychotropic drugs.

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d.

Side Effects: Side effects, usually dose-related, include drowsiness, ataxia, minor skin rashes, edema, menstrual irregularities, nausea and constipation. When treatment is protracted, blood counts and liver function tests are advisable. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined.

Precautions: Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, in long-term treatment and in presence of depression or suicidal tendencies. Exercise caution in administering drug to addiction-prone patients or those who might increase dosage; withdrawal symptoms, similar to those seen with barbiturates or meprobamate, can occur upon abrupt cessation after prolonged overdosage. Caution should be exercised in prescribing any therapeutic agent for pregnant patients.

Supplied: Capsules, 5 mg, 10 mg and 25 mg, bottles of 50.

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc., Nutley, N.J. 07110

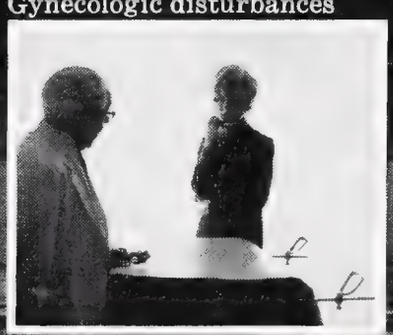
LIBRIUM®
(chlordiazepoxide HCl)

Librium is indicated whenever anxiety is part of the clinical profile, such as in...

Gastrointestinal disorders



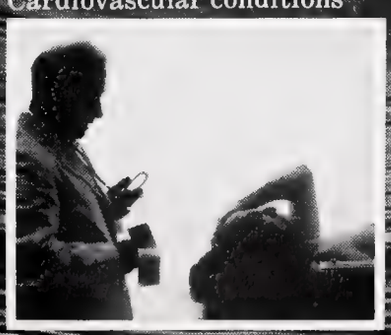
Gynecologic disturbances



Environmental stress



Cardiovascular conditions





Low host resistance?

Consider the "extra" antibacterial activity of Ilosone®

Occasionally, therapeutic failure is due to the patient's inability to mobilize his defenses sufficiently to overcome infection. Typical of this is the debilitated patient, the premature infant, or the diabetic. It is in these patients that the high levels of antimicrobial activity of Ilosone are especially useful. Ilosone has demonstrated antibacterial levels two to four times those of erythromycin base or stearate. Furthermore, it attains them earlier and maintains them longer. Even the presence of food does not appear to affect the activity of Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Dosage: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Ilosone®

Erythromycin Estolate

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana. 501280

Lilly

Anti-V (anti-ce^v) and anti-VS (anti-e^v), rare blood group antibodies, were recently found in two women in Hawaii.

Further Examples of Anti-V and Anti-VS Group Antibodies Found in the Honolulu Area

MITSUO YOKOYAMA, M.D.,* EDITH G. ECKSTEIN, MT(ASCP),† and MAX BOWMAN, MT(ASCP),‡ *Honolulu*

• *Persons possessing certain gene complexes (cDe, cD^ue, and cde) may possess the V antigen. Like Rh antigen, this can induce, either transplacentally or by multiple transfusions, antibodies: anti-V or anti-VS. The phenomenon is commoner in Negroes than in Caucasians. Special crossmatching procedures designed to find this rare antigen have recently demonstrated it in a white woman with multiple pregnancies whose third, fourth, and fifth children had increasingly severe hemolytic disease, and a Hawaiian-Caucasian woman who had received 41 transfusions of bank blood. The multiracial population of Hawaii provides blood of widely varying antigenic patterns from its various ethnic groups, thus increasing the risk of such incidents.*

THE DISTRIBUTION of blood groups among different races may provide material challenging to workers in routine blood-grouping laboratories as well as to geneticists and anthropologists. A disproportionate occurrence of rare blood group antibodies might be found in the serum of pregnant women whose husbands are of different racial origin or—more frequently—in individuals who have had multiple transfusions of blood from different races. Within the Rh system, blood from Negroes can present special problems in that certain Rh antigens common in Negroes are absent, or seldom seen, in whites.

In connection with the present study, anti-V (anti-ce^s), first reported by DeNatale, Cahan, Jack, Race, and Sanger[1] in 1955, was found in the serum of a cde/cde recipient after multiple transfusions. The V antigen was found frequently in Negroes, rarely in Caucasians, and only in persons possessing the gene complexes cDe, cD^ue and cde. Anti-VS (anti-e^s) was described by Sanger, Noades, Tippett, Race, Jack, and Cunningham[2] in 1960, and the antibody apparently reacted with an antigen common to hr^v (V or ce^s) and R'^{s} (Cde^s) which are found more commonly in Negroes than in Caucasians.

We have recently found two such antibodies: anti-V in the serum of a pregnant Caucasian woman, and anti-VS in the serum of a Hawaiian-Caucasian.

The data presented emphasize the importance of crossmatching procedures which are capable of detecting antibodies with diverse serologic characteristics.

CASE 1.—A Caucasian woman, age 36, with the following clinical history:

1950—thyroidectomy; transfusion of several units of blood

1953—normal, full-term baby (Group O, R_1r)

1954—miscarriage at three months

1955—birth of second child at term; infant developed slight jaundice but did not require transfusion and is now living and well. (Group A_1, R_1r)

1958—hydatidiform mole; received about six units of blood during period of several months.

1960—birth of third child at term; slight jaundice developed; no exchange transfusion

Received for publication March 19, 1965.

* Department of Genetics, University of Hawaii, Honolulu, Hawaii.

† Blood Bank, U. S. Army Tripler General Hospital, Honolulu, Hawaii.

‡ St. Francis Hospital, Honolulu, Hawaii.

Genetics paper 7-113. Pacific Biomedical Research Center paper

TABLE 1.—*Reactions of Anti-V After Absorption with A_1B, R_2R_2 Cells.*

CELLS	METHODS *Ficin*	*ICT*
O, R_2R_2, V+, VS+	1:2	1:16
O, r'r, V–, VS+	0	0
O, R_2R_2, V–, VS–	0	0

was required and child is now living and well.

1962—fourth child delivered following induction of labor at 37 weeks; exchange transfusion performed; child is living and well. (Group O, R_1r)

1964—infant with severe hemolytic disease was delivered after early induction of labor. Two exchange transfusions were performed and infant expired at completion of second transfusion.

Prenatal serum tests revealed the presence of anti-Rh_0 (anti-D) wich reacted with all Rh_0 (D) positive cells of the panel* by ficin and indirect antiglobulin tests.

Negative results were obtained with most cells lacking the Rh_0 (D) antigen, but positive results were obtained when the Rh_0 (D) negative cells were V+. No antibodies in other blood group systems could be detected. Absorption of the serum, with group A_1B, R_2R_2† V-cells removed anti-Rh_0 (anti-D) activity. After three successive absorptions with two volumes of washed, packed red cells only anti-V was left.

The anti-D reacted well by albumin, ficin and antiglobulin methods at 37° C. The anti-V activity was weak in the ficin method, but strong in indirect antiglobulin tests. Anti-VS activity was ruled out by the tests with O, rr, V–, VS+ red cells (Table 1).

The antigenic stimulus for the production of anti-V was assumed to be of transfusion origin because of the following: the woman was typed as O, N, rr, V–, VS–, and her husband as A_1, M, R_1R_1, V–, VS–. Clinical history, however, indicates that the anti-D antibody responsible for the hemolytic disease of children born in 1962 and 1964 was probably due to stimulation by D antigen inherited from the husband. An anti-A antibody with immune characteristics was also observed in the mother's serum.

CASE 2.—A Hawaiian-Caucasian housewife, age 34, O, R_1R_1, suffering from a pancreatic tumor (Zollinger-Ellison syndrome), had been the recipient of 41 units of blood on previous occasions.

TABLE 2.—*Reaction of Anti-VS with Panel Cells.*

CELLS	METHODS *Ficin*	*ICT*
O, R_2R_2, V+, VS+	1:32	1:4
O, r'r, V–, VS+	1:32	1:4
O, R_2R_2, V–, VS–	0	0

The routine hospital crossmatching procedure of saline, albumin, and indirect antiglobulin tests did not demonstrate any incompatibility with donor bloods. However, the patient suffered a febrile reaction during the last transfusion. A commercial cell panel as well as the donor bloods were used for antibody detection studies, and the patient's serum showed antibody activity with O, rr, VS+ red cells. The antibody reacted more strongly by the ficin method than by the indirect antiglobulin test, which gave very weak reactions. Tests with the cell panel showed only anti-VS specificity; other blood group antibodies including anti-V were ruled out (Table 2).

The antigenic stimulation for the production of anti-VS was assumed to be transfusions of VS+ blood rather than isoimmunization by pregnancy since the husband's blood type was shown to be O, R_1R_1, V–, VS–.

Since the population of Hawaii is multi-racial, there is great variation in the sources of blood for transfusion. Blood for transfusion is also obtained from members of the Armed Forces stationed in Hawaii. The resultant wide variety of blood group antigens in donors can often result in antigens, fairly common in one ethnic group, being transfused into recipients of racial groups lacking the particular antigens.

This study showed, also the importance of multiple-method crossmatch and antibody detection procedures.

ACKNOWLEDGMENT

We are indebted to Dr. Philip Levine, Ortho Research Foundation, New Jersey, and Dr. Ruth Sanger, Medical Research Council, Blood Group Research Unit, London, England, for their identification of the antibodies. ■

REFERENCES

1. DeNatale, A., Cahan, A., Jack, J. A., Race, R. R., and Sanger, R.: V: a "new" Rh antigen, common in Negroes, rare in white people. JAMA 159:247-250 (Sept.) 1955.
2. Sanger, R., Noades, J., Tippett, P., Race, R. R., Jack, J. A., and Cunningham, C. A.: An Rh antibody specific for V and R'ˢ, Nature (London) 186:171 (April) 1960.

* In this study the panel cells were obtained from Ortho Pharmaceutical Corp., Raritan, N. J.

† Dr. Ruth Sanger kindly informed us that she used Dr. Race's cells, A_1B, R_1R_1, for absorption of anti-D antibody, and four successive absorptions were required.

The medical profession and the lay community have both been remiss in acknowledging the need for measures to combat physical abuse of children.

The Battered Child "Syndrome"
A Review

CAPTAIN FRED M. NOMURA, MC, USA,* *Honolulu*

• *Emotionally disturbed parents may inflict serious physical abuse on children in their care. Any child presenting with trauma for which there is no plausible explanation, or with evidence of multiple or repeated injuries, may have been the victim of such abuse. The physician who sees the child should explore this possibility, and a Child Protective Agency should be available to help him do so.*

THE TERM "battered-child syndrome" was originally coined by Kempe *et al.*[1] in 1961 "to characterize a clinical condition in young children who have received serious physical abuse, generally from a parent or foster parent." Other authors have used the terms "unrecognized skeletal trauma," "willful trauma to children," and "the abused child," but all refer to the same clinical syndrome.

Prior to 1953, the medical profession was unaware of the magnitude of this problem. Since that time, and particularly since 1962, numerous reports have appeared in the medical literature and a better understanding of this syndrome of physically abused children has emerged.

Except for occasional sensational reports of cruelly treated children in the newspapers, the public had been equally ignorant of the problem. The idea that some parents could intentionally inflict injuries upon their children was distasteful; the idea that this occurred with any frequency was totally unacceptable. However, faced with mounting evidence from medical, police, and social service files, as well as recent articles in three national magazines, the public is becoming painfully aware that child abuse is a significant problem.

The spectrum of child neglect and abuse is a wide one. At one extreme there is casual neglect of a child's needs; at the other extreme is murder. In between these extremes is a variety of willful abuse, including emotional deprivation, malnutrition, intentional poisoning, abandoning of children, physical abuse, and sexual assault. This paper will focus on the physically abused child through a review of the current medical literature on the problem.

Received for publication July 20, 1965.
* Formerly stationed at U. S. Army Tripler General Hospital.

HISTORY

Evolution of the concept that trauma, willful or accidental, could produce characteristic x-ray changes in growing bones of infants and children took many years. Over the last half-century, sporadic reports have appeared describing curious skeletal lesions in children, the etiology of which remained obscure; many disease processes were postulated but none confirmed. Only in the last ten years has it become apparent that these authors were describing the classic x-ray findings of the "battered-child syndrome."

In 1888, West[2] presented several cases of acute periosteal swelling in infants of the same family; he postulated rickets, but the lesions resolved spontaneously. In 1935, Snedecor[3] reported "traumatic ossifying periostitis" in newborns delivered by breech extraction; he felt that the excessive traction and torsion of the legs during delivery stripped the periosteum from the shaft of the long bones and resulted in subperiosteal hemorrhage.

Caffey,[4] in 1946, reported on the association of multiple fractures of the long bones with chronic subdural hematomas in infants. There was no history of trauma to the head or the long bones in any of his six cases; likewise, there was no evidence of generalized or local skeletal disease to predispose the bones to fractures. Caffey suspected a traumatic origin, but the lack of history discouraged further pursuit of the matter.

Silverman,[5] in 1953, described three infants with multiple fractures, and attributed the skeletal lesions to trauma. History of trauma was elicited from the parents, who admitted to rough play or to accidental injury, as in grabbing the infant to prevent a fall. Silverman's conclusion was that the trauma was probably indeed accidental and not willful, and that "extreme care must be exercised not to overwhelm responsible custodians of the infant with feelings of guilt as the history is elicited."

The issue was further confused when Astley[6] reported in 1953 six cases of multiple metaphyseal fractures similar to those reported by Caffey and Silverman. Because there was no history of trauma, and because the parents were "normal, sensible individuals," he postulated an underlying structural abnormality of the metaphysis, and labelled this syndrome "metaphyseal fragility of bone," in spite of bruises and other gross soft tissue injuries evident in these infants. This concept was interesting but was never confirmed and fell into disrepute when the syndrome of the "battered child" emerged.

Then in 1955, Woolley and Evans[7] reported 12 infants with multiple fractures and found that they invariably came from unstable households with a high incidence of neurotic or frankly psychotic behavior. The nature of the multiple and repeated injuries and the unstable parentage dictated a single conclusion—repeated willful physical abuse by the parents.

Finally, in 1962, Kempe and others[1] published their excellent paper, the "battered-child syndrome," presenting it as a significant problem, and offering useful guides in diagnosis and management.

INCIDENCE

Kempe and others[1] reported the results of a nationwide 1961 survey involving 71 hospitals and 77 district attorneys. Over a one-year period, 749 children had been the victims of physical abuse; 78 of the children died, and 114 suffered permanent brain damage. In only one-third of the cases was proper medical diagnosis followed by some type of legal action.

A survey by the American Humane Association[8] showed that during 1962, 662 cases of child abuse were reported in the newspapers of this country. Of these children, 82 per cent were under four years of age, and 27 per cent died from the injuries.

Appalling as these figures are, they unfortunately reflect only a small proportion of the total problem. For every documented case of child abuse which comes to the attention of physicians, police, and newspapers, there are countless others which remain unsuspected or undocumented; thus, the true incidence of the problem cannot be accurately defined. It has been estimated that the number of physicially abused children in this country may be as high as 10,000 per year. Whatever the true numerical incidence may be, there can be little question that the battered-child syndrome is a major cause of childhood morbidity and mortality.

ETIOLOGY

Why are some children viciously beaten by their parents? The etiology of the problem is not to be found in the children themselves; there seems to be nothing innate to the battered child which might predispose him to violent physical abuse except, perhaps, the quite normal behavior of crying when hungry or uncomfortable. In a few cases, a child's physical defects or unusually irritating behavior may be viewed as a precipitating factor of the abuse, but in most cases, the fault should be sought in parents who react to a variety of internal and external stresses by abusing the child.

William Golding's *Lord of the Flies* develops the theme that children are capable of quite as much cruelty and evil as adults, since these traits are inherent to all humans. All of us are certainly capable of cruelty; rare indeed is the man who has never felt the urge to strike out at a screaming child. Most of us are able to suppress this desire for violence, and are filled with shame for harboring such brutal thoughts.

The fact that some parents not only fail to suppress such thoughts, but actually execute them maliciously, invites explanation. Exploration of socioeconomic and psychiatric aspects is enlightening and allows construction of certain parent profiles.

A basic flaw seemingly common to all such parents is a defect in character structure which permits aggressive impulses to be expressed too freely at the slightest provocation. Though few such parents are outrightly psychotic, many, if not most, suffer from neuroses, inadequate or immature personalities, alcoholism, mental retardation, and the like. Unstable or broken marriages, borderline socioeconomic status, sexual promiscuity, and minor criminal offenses are reportedly common. Certainly child-beating may occur in families with sound educational and financial background, but even in these cases, under scrutiny, many below-the-surface conflicts may emerge. The Massachusetts Society for the Prevention of Cruelty to Children[9] studied 115 families involved in child abuse in 1960. These families had lived in their com-

munities for years, and most were self-supporting. Few of the families had any ties with the community at large. Among 90 per cent there appeared serious social problems. Marital or other family conflicts were frequent, and premarital conception occurred in almost half of the families. It was concluded that these families had many problems at the time of marriage, and these were multiplied and intensified by the time the child-beating episode occurred.

Frequently it is found that the guilty parents were themselves the victims of physical abuse at the hands of their parents during their own childhood. Kempe[1] explains this perpetuation of child abuse from one generation to the next by identification with the aggressive parent and adopting the philosophy of "do unto others as you have been done by."

Curtis[10] also emphasizes the tendency of the battered child to identify with aggressive parents and pattern his behavior accordingly. He further poses one possible grave consequence: "namely, the probable tendency of children so treated to become tomorrow's murderers and perpetrators of other crimes of violence, if they survive." His assertion that violence breeds violence is based both on theoretical grounds and on clinical evidence that the child who is treated with violence which cannot always be anticipated will himself react with blind violence, an expression of his fearful insecurity.

From this discussion it may be concluded that although there is a paucity of direct psychiatric research and literature on the subject of the battered-child syndrome, much is known about the kinds of parents who are likely to abuse their children, and the reasons most likely to impel them. The real problem is how to utilize this information in treating and, if possible, preventing such abusive activity.

CLINICAL MANIFESTATIONS

The battered child may present with a variety of clinical signs and symptoms reflecting physical abuse. The most common presenting complaints are: pain or deformity in an extremity, skin bruises or swelling, failure to thrive, convulsions, vomiting, and a large head. History of trauma is usually strongly denied, and there is a marked discrepancy between the parents' story and the physical findings in the child.

Although children of any age may be involved, most are under three years of age; the highest incidence is in infants. Of 100 cases in the literature,[11] 80 per cent were children under 16 months of age, and 65 per cent were under nine months. The oldest child was ten.

The child's general state of health often appears below par, and there is frequently evidence of malnutrition, multiple injuries in various stages of healing, poor skin hygiene, and emotional deprivation. The skin may show ecchymoses, petechiae, abrasions, burns, and pallor. Joints or extremities may be swollen, warm, and painful, with limited range of motion. There may be evidence of central nervous system trauma with altered consciousness, ataxia, macrocephaly or the like. Subdural bleeding is a frequent associated finding; of 50 children in one study, 14 had subdural hematomas. Not infrequently the child will present *in extremis,* with shock, dehydration, or convulsions.

McCort[12] reported ten children who presented initially with unexplained visceral trauma with acute abdominal crises. Of these ten, seven had perforation of the small bowel; two sustained liver lacerations, and one perforation of the stomach. In all cases, other physical findings and x-ray evidence subsequently led to the diagnosis of physical abuse.

McHenry and others[11] assessed growth and development in 30 battered children and found significant retardation in 20 cases.

Once the child is placed within the protective confines of the hospital ward, improvement in his general health usually begins, and most significantly, no new lesions of soft tissue or bone occur.

The battered child often reacts to the hospital situation in a rather characteristic manner. Morris and others[13] have observed some noticeable contrasts in behavior between well-nurtured infants and those who are victims of chronic abuse.

Some typical forms of behavior of well-nurtured children in a hospital:

1. Cling to parents when they are brought in.
2. Turn to their parents for assurance and comfort during and after examination and treatment.
3. Constantly show by words and action that they want their parents and want to go home.
4. Are reassured by their parents' visits.

Some typical forms of behavior of battered children in a hospital: .

1. Cry hopelessly under treatment and examination, but cry very little in general.
2. Do not look to parents for reassurance.
3. Are wary of physical contact initiated by parents or anyone else.
4. Become apprehensive when adults approach some other crying child.
5. Seem less afraid when admitted to the ward, and settle in quickly.
6. Are constantly on the alert for danger.
7. Assume a flat "poker face" when discharge home is mentioned.

"In general, cared-for children turn to their parents for safety in life. Neglected and battered children endure life as if they are alone in a dangerous world with no real hope of safety."

APPROACHING THE PARENTS

When physical abuse of a child is suspected, the parents necessarily become intimately involved in the investigation. Since the physician is frequently the parents' first contact, his role is paramount; a skillful approach may lay the groundwork for eventual resolution of the problem, while tactless handling of the situation may turn the parents away from much needed help.

The physician must overcome personal feelings of anger and shock, and forego any judgmental attitude. He must be sympathetic, and understand that the parents' brutal action is but a symptom of a serious emotional problem. The objective is not to establish guilt but instead to assess the needs of child and parents, and to gain rapport for future management.

The parents will initially deny that trauma has been involved, and a paucity of information will be offered. This reluctance to expose the truth may be overcome in some cases by offering the parents an explanation for their action. Thus, it might be suggested that "new parents sometimes lose their tempers and are a little too forceful in their actions;"[1] the parents may then grasp this as the excuse for their behavior. The physician may also indicate that the diagnosis is well established on the basis of clinical and x-ray findings, that the parents have an obligation to avoid repetition of the trauma, and that help is available to them. In many cases, however, regardless of the approach used, the parents will continue to deny their abusive behavior and thwart all attempts to constructively manage the problem. Whatever the outcome of the interview, a full investigation is necessary, and the physician must determine if the hazard to the child is sufficiently great to warrant removing him from the home.

In assessing parents, certain forms of behavior may be helpful in substantiating the suspicion of brutality. Morris and others[13] have observed the following differences between nurturing and neglecting parents whose children are hospitalized.

Typical protective parents of injured children:

1. Are spontaneous in reporting details of the injury.
2. Show concern about the injury, the treatment, and the prognosis.
3. Exhibit a sense of guilt.
4. Ask questions about discharge date and follow-up care.
5. Visit frequently and bring gifts.

Typical neglecting, abusive parents:

1. Do not volunteer information about the injury, and are evasive or contradictory.
2. Critical of the child and angry with him for being injured.
3. No indication of guilt or remorse.
4. Show no concern about the injury, treatment, or prognosis.
5. Seldom visit or play with the child.
6. Do not inquire about discharge date or follow-up care.
7. Are preoccupied with themselves and not concerned about the child.
8. Reveal in interviewing that they were treated similarly in their own childhood.
9. Show overwhelming feelings that they and their children are worthless.

Such observations are useful not only in diagnosis, but also in assessing the potential of the parents to provide for the well-being of the child.

DIAGNOSIS

If battered children were able to tell their own story, their presenting complaints would all be the same and would quickly lead the physician to the correct diagnosis. Unfortunately, the story is told by the parents, and the information so gathered frequently leads the physician far astray. Seldom do the parents initially offer a history of trauma, and most are quick to deny this possibility when directly faced with it. Consequently, the traumatic nature of the condition may be entirely unsuspected, and the physician's initial impression may include a gamut of local or systemic diseases. In McHenry's 50 children with multiple fractures,[11] the diagnosis of multiple skeletal injuries was correctly suspected on admission in only eight cases.

When the diagnosis of physical abuse is overlooked, the child is unwittingly returned to his unfriendly environment where further injury, and even death, may occur. A high index of suspicion is therefore required in any case of multiple soft tissue and skeletal injuries, failure to thrive, or where there is a marked discrepancy between the clinical picture and the history from the parents. At the slightest suspicion, a complete bone survey should be obtained; this roentgenographic examination may then reveal diagnostic information.

Repeated trauma to growing bones produces characteristic x-ray changes that are pathognomonic—Kempe[1] aptly states that "to the informed physician, the bones tell a story the child is too young or too frightened to tell."

Any bone may be involved, but the extremities are most commonly affected, particularly the proximal humerus and the distal femur. Fractures of the ribs and tubular bones are not unusual, and subdural hematomas, with or without skull fractures, may be present. Metaphyseal fragmentations are commonly found in the immediate posttraumatic period and appear as small chip fractures of the metaphyseal "corners" of the long bones. Healing results in fusion of the fragments with the shaft and a "squaring-off" of the ends of the bone. Epiphyseal separation may occur.

Cortical thickening is a frequent finding, but five to ten days must elapse after injury before the changes are evident on x-ray. The periosteum of infants is less securely attached to the underlying bone than in older children and traumatic hemorrhage may cause extensive stripping from the shaft and lead to large subperiosteal hematomas. Calcification then results in extensive new bone formation under the elevated periosteum; resorption then gradually occurs, but for months after the original injury the cortex will appear distinctly thickened. Overt fractures may be present in other bones. Multiple bone involvement is the rule, and the finding of multiple lesions in different stages of healing is the *sine qua non* for the x-ray diagnosis of repeated trauma.[14]

Immediately after a single episode of trauma, there may be no x-ray findings except for soft tissue swelling. Follow-up films are therefore necessary to detect those bony lesions which require time before they are demonstrable radiographically.

The roentgenographic differential diagnosis is usually not difficult. A variety of local and systemic bone disease may be considered, but most can be eliminated on the basis of the clinical manifestations and the x-ray findings; pertinent laboratory tests are also helpful. In general, however, the x-ray findings in the battered-child syndrome are sufficiently distinct and specific and permit a radiologic diagnosis even in the absence of a history of trauma.

MANAGEMENT

The first recorded effort in the United States to protect a child from inhuman treatment occurred in New York City in 1874.[15] Prompted by stories of constant beatings of a little girl named Mary Ellen, a church worker sought legal protection for the child, but learned that there was no law covering cruelty to children; therefore, the police authorities could take no legal action to remove the child from her home. She then appealed to the Society for the Prevention of Cruelty to Animals, and under a law enacted to prevent cruelty to dogs, horses, and other animals, the child was brought to court and her tormentor was jailed. The first Society for the Prevention of Cruelty to Children was formed that year in New York, 1874.

Management of such cases today requires a multidisciplinary approach, involving the cooperation of medical, social, and legal services. Treatment begins with the care of the child's injuries, but must be followed by evaluation of the parents and the home situation, attempts to rehabilitate the parents, prosecution of the parents if necessary, and disposition of the child.

Immediate treatment of the battered child frequently necessitates hospitalization, not only to care for the inflicted injuries, but also to remove the child from his hostile environment. Photographs and a complete x-ray survey of the bones should be obtained. Fractures and intracranial injuries will require appropriate orthopedic and neurosurgical treatment and due attention must be paid to malnutrition, anemia, visceral injuries, and the like.

PROTECTIVE ACTION

The case must then be reported to the proper authorities to insure that action will be taken to prevent further abuse. In many instances, the police department or juvenile court is initially notified, but this action is not always necessary or desirable. The physician should acquaint himself with the community agencies which provide protective services for children. These may be private agencies such as Society for the Prevention of Cruelty to Children, Children's Humane Society, or Children's Aid Society; or it may be under public auspices, such as a child protective unit in the welfare department. These agencies are essentially casework services staffed by trained social workers, and can provide a vital service in the management of such cases. The social worker's investigation of the parents and the home situation will help decide whether the child's environment is so hazardous that immediate removal from the home is mandatory.

If removal is necessary, the case worker files a petition in the juvenile court and arranges for temporary care of the child in a community shelter, foster home, or with relatives. Through his counseling, he may help inadequate parents to face the realities of life and assist them in solving the problems which led to abuse of the child. He encourages parents to accept psychiatric help and recommends other professional and community facilities as indicated. His service is designed to strengthen family life and to reinforce the desire and ability of these people for responsible parenthood.

There seems to be little question that such child protective agencies can be of valuable service in physical abuse cases. Unfortunately, in many communities such agencies are either inadequate or nonexistent. In a recent nationwide survey of 434 abuse cases, 75 per cent were reported to police authorities, and only eight cases were referred to a social agency.[16] The remaining cases were referred to the courts or probation departments. The lack of adequate social agencies in many communities therefore results in such cases becoming the

primary responsibility of law enforcement authorities. A 1962 amendment to the Social Security Act defines child protection as a responsibility of public child welfare programs. It is therefore imperative that funds be made available to assure that every community has access to an effective child protective agency.

Where child protective services are not available, the case is reported to the police or juvenile court for investigation and appropriate action. This approach may result in criminal charges against the parents and prosecution more frequently than would otherwise be necessary. Prosecution of the parents is difficult and requires proof of the abusive act through evidence which establishes guilt "beyond a reasonable doubt." Because these acts usually occur in the home without outside witnesses, lack of evidence frequently makes it impossible to sustain the burden of proof, and the prosecution fails. The result of an unsuccessful prosecution may be increased hazard for the child, for he will remain in the custody of a parent who, in addition to his other problems, may now be embittered by the police and court experience, and his "vindication" by the failure to find him guilty may be viewed as a license to continue the abuse.

THESE PARENTS NEED HELP!

Furthermore, punishment of the parents through criminal prosecution does not correct the fundamental cause of the abuse. Parents need help to understand their problems and accept their responsibilties as parents. Establishing guilt must remain secondary to this goal. While the police and courts may indeed play a vital role in some cases where removal of the child from the home or prosecution of the parents is necessary, the services of a child protective agency remain the cornerstone of management.

Final disposition of the child will ultimately depend on the parents' capacity for rehabilitation. It has been estimated that over half of these children are liable to further injuries or death if appropriate steps are not taken to remove the child from his home or alter the home environment.[15] These odds for further abuse make it necessary in many cases to keep the child in temporary lodging with relatives or in a foster home until there is assurance that the home is no longer unsafe for the child. In those cases where the parents' problems are so deep-seated and unyielding to therapy that removing the hazard of abuse seems impossible, a court order is then necessary to revoke custody of the child from the parents and permanently place him in a different environment.

PHYSICIANS' FAILURE

In a study of 180 battered children referred to the Massachusetts Society for the Prevention of Cruelty to Children in 1960, only nine per cent of the cases were referred by hospitals or physicians, though these agents had been involved in over 30 per cent of them.[17] Many references have been made to physicians' failure or reluctance to report cases of suspected physical abuse.[1, 15, 18, 19]

What accounts for this failure? A number of reasons have been postulated, but Dodge[19] feels that the basic problem is a lack of awareness on the part of doctors that parents may seriously injure or even kill their children; therefore, misdiagnosis is frequent. The pattern of repeated abuse may be overlooked because the parents may shift from one doctor to another deliberately with each episode.

To some physicians the idea that the parents abused their child is so repugnant that they deny this possibility even in the face of clear-cut evidence.

Even if parental abuse is suspected, the physician may not report the case because he is totally unaware of the steps to be taken. In his confusion, he may comfort himself in the belief that although it might have happened once, it couldn't happen again.

Many physicians are reluctant to report because they fear the legal entanglement which might follow, and loss of time from work necessitated by appearances in court. And finally, there is the fear of liability suits filed against them by angry parents.

What, then, can be done to insure that each case of child abuse is promptly reported? Education of the medical profession is sorely needed; medical students, house officers, and all physicians in practice should be made acutely aware of this syndrome. They should be taught to suspect physical abuse in any child with unexplained injuries, and should be aware of the risk to life and limb imposed on the child if the diagnosis or management is inadequate. It must be stressed that the physician's primary responsibility is to the injured child, but also that the parents themselves are in need of treatment. And, finally, the availability of resources in the community must be made clear.

In addition to this educational process, many authorities feel that mandatory reporting of suspected physical abuse is necessary to assure detection of all cases. Laws requiring the physician to report such cases and providing immunity from civil or criminal liability already exist in some states and are being considered in others.

If these steps of education and legislation are properly taken, physicians should be fully armed to meet this challenge of the physically-abused child.

STATUS OF "BATTERED-CHILD" LEGISLATION

For many years California was the only state with legislation requiring physicians to report any suspected case of child abuse to the police. In the last two years, as a result of growing public concern, a number of other states have passed such legislation, and it seems likely that many other states will follow suit in the near future. The primary purpose of a mandatory reporting law is to provide protection to the child; an equally important goal (which has been adequately considered in only a few of the recently passed state laws) is to provide for rehabilitation of the parents and strengthening of family life.

In 1962, the Children's Bureau, in conjunction with the U. S. Department of Health, Education and Welfare, drew up a statement of principles and suggested language for state legislation on reporting of the physically abused child.[20] This "model law" follows:

SUGGESTED LANGUAGE FOR STATE LEGISLATION ON REPORTING OF THE PHYSICALLY ABUSED CHILD

AN ACT FOR THE MANDATORY REPORTING BY PHYSICIANS AND INSTITUTIONS OF CERTAIN PHYSICAL ABUSE OF CHILDREN

1. Purpose
The purpose of this Act is to provide for the protection of children who have had physical injury inflicted upon them and who are further threatened by the conduct of those responsible for their care and protection. Physicians who become aware of such cases should report them to appropriate police authority thereby causing the protective services of the State to be brought to bear in an effort to protect the health and welfare of these children and to prevent further abuses.

2. Reports by Physicians and Institutions
Any physician, including any licensed doctor of medicine, licensed osteopathic physician, intern and resident, having reasonable cause to suspect that child under age of.....brought to him or coming before him for examination, care or treatment has had serious physical injury or injuries inflicted upon him other than by accidental means by a parent or other person responsible for his care, shall report or cause reports to be made in accordance with the provisions of this Act; provided that when the attendance of a physician with respect to a child is pursuant to the performance of services as a member of the staff of a hospital or similar institution he shall notify the person in charge of the institution or his designated delegate who shall report or cause reports to be made in accordance with the provisions of this Act.

3. Nature and Content of Report; to Whom Made
An oral report shall be made immediately by telephone or otherwise, and followed as soon thereafter as possible by a report in writing, to an appropriate police authority. Such reports shall contain the names and addresses of the child and his parents or other persons responsible for his care, if known, the child's age, the nature and extent of the child's injuries (including any evidence of previous injuries), and any other information that the physician believes might be helpful in establishing the cause of the injuries and the identity of the perpetrator.

4. Immunity from Liability
Anyone participating in good faith in the making of a report pursuant to this Act shall have immunity from any liability, civil or criminal, that might otherwise be incurred or imposed. Any such participant shall have the same immunity with respect to participation in any judicial proceeding resulting from such report.

5. Evidence Not Privileged
Neither the physician-patient privilege nor the husband-wife privilege shall be a ground for excluding evidence regarding a child's injuries or the cause thereof, in any judicial proceeding resulting from a report pursuant to this Act.

6. Penalty for Violation
Anyone knowingly and willfully violating the provisions of this Act shall be guilly of a misdemeanor.

Subsequent to the publication of the Children's Bureau Model Law, at least 18 states introduced such legislation, and laws were enacted in 13 states in 1963. Many of these laws were hastily conceived and too poorly constructed to deal with the total problem. A recent study of the 13 new statutes revealed a lack of uniformity in language, objectives, and methods for managing the problem.[21] Some of the findings of this study follow, and should be carefully considered by any group seeking to draft legislation on this subject.

Ten of the 13 newly enacted bills are primarily concerned with mandatory reporting; these states include California (1963 amendment to preexisting law), Colorado, Florida, Idaho, Minnesota, Ohio, Oregon, Pennsylvania, Wisconsin, and Wyoming. The laws of the remaining three states (Indiana, Maryland, and Oklahoma) merely define the crime of child abuse and set the limits of sentence; they are not concerned with mandatory reporting or management of such cases. Consequently, they cannot be considered effective protective legislation and will not be dealt with further in this discussion.

The basic objective of the mandatory reporting laws is identification and protection of the abused child. However, all the states do not seem to agree on the secondary objectives. Five states have placed the law in the welfare law or in the general statutes; therefore, their secondary objective seems to be to attack the fundamental problem in the home and strengthen parental care, generally through the services of a Child Protective Agency. The remaining five states have incorporated the law into the criminal code; their objective would seem to be the criminal prosecution of the parents, with little provision made for rehabilitation.

All of the statutes are in complete accord regarding who is to make the report; each of them directs physicians and surgeons who treat the abused child to report the case. However, the agency designated to receive the report differs from state to state. In six states the designated agency is the police department or the juvenile court; three states designate the Department of Welfare or a community Child Protective Service; and Oregon requires the report to be made to the coroner or medical investigator.

A very vital issue is the kind of responsibility which the law imposes on the agency designated to receive the report. "What that agency does about the report will determine the degree of protection the community makes available to its abused children!"[21] And yet, seven of the ten laws fail to define this responsibility, and make no mention of the agency's obligation to act upon receipt of the report. The remaining three states clearly indicate

the intent to provide the services of a Child Protective Agency to prevent further abuse and preserve family life.

All but three of the laws grant immunity from civil or criminal liability to physicians reporting cases of suspected child abuse. The statutes in California, Oregon, and Wisconsin omit the immunity clause. All but three states have an exemption clause which states that the privileged communication between patient and physician shall not be grounds for excluding evidence. Five of the laws provide a penalty clause which makes it a misdemeanor for a physician to wilfully violate provisions of the act.

From this study, one might conclude that while it is indeed commendable that ten states have passed battered-child legislation, it would seem that only a few of the statutes contain provisions for totally adequate management of suspected child abuse cases.

One final question must be answered: Is such legislation necessary? A few authors feel that since the physician has both a moral and ethical obligation to report such cases, it should not be necessary to also impose a legal obligation. However, there is almost universal agreement that such legislation is desirable. A well-conceived mandatory reporting statute will increase professional and public awareness of the problem, prompt detection and reporting of suspected cases. It may stimulate community action to provide protective services, and can protect the physician by dissolving the ethical barrier of privileged communication and absolving him from liability actions. The most vehement objectors to the legislation to date have not questioned the need for such laws, but have objected to the practice of reporting these cases to the police. This objection seems valid, and is explained in an editorial in the *New England Journal of Medicine*[22] by the statement that "once such action has been taken all chance of therapy for the unfortunate family is lost." Instead, it is recommended that the report be made to a Chid Protective Agency which is accustomed to careful investigation of the family, providing social therapy when indicated, and is able to remove the child from the home if necessary. This recommendation makes sense, and undoubtedly will be strongly considered in the drafting of any future battered-child legislation.

SUMMARY

1. Willful physical abuse of children by their own parents is a significant problem.

2. The etiology of this disorder is to be sought for in the emotional disturbances of the parents; occasionally, a child's very irritating behavior may contribute as a precipitating factor.

3. This condition should be suspected in any child presenting with unexplained trauma, evidence of multiple or repeated injuries, or in any case where there is a marked discrepancy between the physical findings and the story told by the parents.

4. The diagnosis can often be established on the basis of characteristic x-ray findings.

5. The approach to the parents should be nonpunitive, with a view to their rehabilitation and strengthening of their family life.

6. The services of a Child Protective Agency are vital and should be available to all communities.

7. There is a great need for public and professional education and for legal protection of those individuals who report suspected cases.

8. Only a few states have adequate "Battered-Child" legislation today. ■

U. S. Army Hospital, Fort George G. Meade, Maryland.

REFERENCES

1. Kempe, et al.: The battered child syndrome, JAMA 181:17 (July 7) 1962.
2. West, S.: Acute periosteal swelling in several young infants of the same family, probably rickety in nature, Brit. Med. J. 1:856, 1888.
3. Snedecor, S. T., Knapp, R. E., and Wilson, H. B.: Traumatic ossifying periostitis of newborn, Surg. Gyn. and Obstet. 61:385 (Sept.) 1935.
4. Caffey, J.: Multiple fractures in the long bones of infants suffering from chronic subdural hematoma, Am. J. Roentgenol. 56:163 (Aug.) 1946.
5. Silverman, F.: The roentgen manifestations of unrecognized skeletal trauma in infants, Am. J. Roentgenol. 69:413 (Mar.) 1953.
6. Astley, R.: Multiple metaphyseal fractures in small children, Brit. J. Radiol. 26:577 (Nov.) 1953.
7. Woolley, P. V., and Evans, W. A.: Significance of skeletal lesions in infants resembling those of traumatic origin, JAMA 158:539 (June 18) 1955.
8. Editorial: Postgrad. Med. 35:446, 1964.
9. Fontana, V. J., Donovan, D., and Wong, R. T.: The "maltreatment syndrome" in children, New Eng. J. Med. 269:1389 (Dec. 26) 1963.
10. Curtis, G. C.: Violence breeds violence—perhaps?, Amer. J. Psychiat. 120:386 (Oct.) 1963.
11. McHenry, T., Girdany, B. R., and Elmer, E.: Unsuspected trauma with multiple skeletal injuries during infancy and childhood, Pedit. 31:903 (June) 1963.
12. McCort, J., and J. Vandagna: Visceral injuries in battered children, Radiol. 82:424 (Mar.) 1964.
13. Morris, M. G., Gould, R. W., and Matthews, P. J.: Toward prevention of child abuse, Children, Mar.-Apr., 1964.
14. Gwinn, J. L., Lewin, K. W., and Peterson, H. G.: Roentgenographic manifestations of unsuspected trauma in infancy, JAMA 176:926 (June 17) 1961.
15. Fontana, V. J.: The neglect and abuse of children, N.Y. State J. Med. 64:215 (Jan. 15) 1964.
16. De Francis, V.: Child abuse—preview of a nationwide survey, Children's Division, The American Humane Association, 1963.
17. Merrill, E. J.: Physical abuse of children: an agency study. In protecting the battered child, Children's Division, The American Humane Association, 1962.
18. Schloesser, P. T.: The abused child, Bull. Menninger Clinic 28:260 (Sept.) 1964.
19. Dodge, P. R.: Medical implications of physical abuse of children. In Protecting the battered child, Children's Division, The American Humane Association, 1962.
20. The abused child: principles and suggested language for legislation on reporting of the physically abused child, U.S. Department of Health, Education and Welfare, Children's Bureau, 1963.
21. De Francis, V.: Review of legislation to protect the battered child, Children's Division, The American Humane Association, 1964.
22. Editorial: More on the battered child, New Eng. J. Med. 269: 1437 (Dec. 26) 1963.

Child abuse is being recognized in Hawaii, and approximately half the recognized cases are being reported.

Child Abuse in Hawaii

MAJOR PETER H. PATTERSON, MC,* and
DONALD CHAR, M.D.†, *Honolulu*

• *Child abuse is undoubtedly a serious problem in Hawaii, as it is everywhere, but we need to know more about it, and establish guidelines and procedures to be followed, before we can improve our present catch-as-catch-can methods of handling it.*

ON November 22, 1965, the local papers headlined the newsworthy item that a woman living on Oahu, Hawaii, had drowned her five children in a bathtub. This type of headline appears only very rarely across the nation. Yet, every day, adults commit lesser crimes against their defenseless children. Silverman,[1] Bain,[2] Fontana,[3] Kempe,[4] and others have more than adequately demonstrated the need for increased recognition of child abuse in the United States.

As an initial effort to study this problem in Hawaii more intensively, a committee composed of doctors, social workers, teachers, and law enforcement agents was appointed by the Hawaii State Commission on Children and Youth. A questionnaire was set up by this committee and distributed to individuals and agencies involved in health and educational work in Hawaii. Following endorsement by the Hawaii Medical Association, 715 physicians belonging to this organization were contacted for their reactions to and comments on of the problem of child abuse. No breakdown as to physician specialty was made on the original mailing list; however, a general cross section of specialties was covered. This is a preliminary report on some of the responses submitted.

The questions asked were of a general nature, the following information being requested:

1. How many cases have you seen in the last 12 months which you suspect may have been child abuse cases?
2. Were these cases reported? If so, to whom?
3. If not reported, indicate reasons.
4. If not reported, how were these cases handled?
5. What can be done to help in dealing with these cases?
6. Additional comments.

RESULTS

Over half of the physicians replied to the questionnaire (393 of 715). The number of child abuse cases identified by physician respondents totaled 61. How many of these cases represent duplicate reporting is unknown, unfortunately.

Of 393 physicians who responded, 44 reported that they had seen cases of child abuse in the past 12 months. Comments came from 39 more who had not seen a case. The remaining 311 reported "none."

* Pediatric Service, U. S. Army Tripler General Hospital, APO 96438.
† Director of Student Health Services, University of Hawaii.

TABLE 1.—*Child Abuse Cases Identified and Reported by Specialty of Physicians (Hawaii, 1965).*

PHYSICIAN'S SPECIALTY	PHYSICIANS WHO SAW CASES	PHYSICIANS REPORTING	CASES SEEN	CASES REPORTED	% KNOWN CASES REPORTED
Pediatrics	10	5	15	5	29
General Practice	18	9	23	9	39
Radiology	3	3	5	4	80
Surgery	2	2	2	2	100
Dermatology	2	2	2	2	100
Neurology	3	2	4	2	50
Orthopedics	3	1	4	2	50
Psychiatry	3	3	6	6	100
TOTAL	44	27	61	32	

SPECIALTY OF PHYSICIANS REPORTING

Table 1 shows the distribution by type of practice of physicians who saw cases of child abuse. Of the 61 cases, 23 (39%) were identified by general practitioners, 15 (25%) were seen by pediatricians. The three psychiatrists in the group reported seeing a total of six cases. The remaining 17 cases were fairly uniformly distributed among five other specialty practices.

NUMBER OF CASES REPORTED

Of the cases seen, slightly over half were reported. The pediatricians reported five of their fifteen cases. The general practitioners reported nine of their twenty-three cases. The three psychiatrists, two surgeons, and two dermatologists reported all of their ten cases. Reasons for non-reports were not always given. When given, they fell into one of two categories: lack of severity or lack of proof.

TO WHOM REPORTED

As seen in Table 2, of the cases reported to another authority, the police were mentioned as the agency receiving the report in well over half (eighteen). The Department of Social Services was notified in four instances and "another physician" in three. Others mentioned were "Children's Hospital" (two), "School Principal" (one), and "Department of Health" (one). Two doctors could not recall to whom they had reported. The remaining physician failed to specify.

TABLE 2.—*Frequency of Reports by Agency or Person Receiving the Report.*

AGENCY OR PERSON	FREQUENCY
Police	18
D. S. S.	4
Physician	3
Children's Hospital	2
School Principal	1
Board of Health	1
Cannot remember	2
Not specified	1
TOTAL	32

HOW UNREPORTED CASES WERE HANDLED

Responses to the question on how unreported cases were handled may be seen in Table 3. They fell into four categories, parent counselling being mentioned most frequently (eight). Handling by a social worker, continued observation of the child, and removal of the child to another home were each mentioned once. This question was left unanswered by 18 (62%) of the physician respondents who had seen cases of child abuse.

TABLE 3.—*Handling of Unreported Cases.*

HOW CASES HANDLED	FREQUENCY
Parents counseled	8
Handled by social worker	1
Continued observation	1
Removed child to another home	1
TOTAL	11

SUGGESTIONS OFFERED

Suggestions dealing with the problem of child abuse were varied and interesting. Thirty-two suggestions were made. Few were mentioned more than once. The suggestion most frequently mentioned was enactment of a mandatory reporting law with provision for immunity of the reporter. One suggestion encouraged reporting but emphatically opposed the mandatory feature.

Education of the public was mentioned five times. Making the police department responsible for handling child abuse cases was mentioned four times. Indicating the proper agency to which cases might be referred and the procedure for such referral was mentioned three times. All other suggestions were mentioned only once.

COMMENT

The survey suffered from basic limitations in design, the greatest of which relates to lack of precision in the definition of child abuse. Should this be restricted to mean physical abuse alone, or should neglect or desertion also be considered child abuse? The committee discussed this question at length. It was agreed that neglect or desertion may be more traumatic to the growing child than physical trauma in many instances. However, it was decided that this initial probe into the problem should be made in broad terms to encourage reporting. Parenthetically, the committee will pursue further study of the problem, using the broader definition, which included child neglect as well as physical abuse.

Another limitation was the impossibility of determining the extent of duplication of reporting of the cases identified. The wording of the questions also allowed for free interpretation and the spontaneous answers often provided by respondents were difficult to assess statistically.

In spite of these and other valid criticisms of the study, the data secured from the returns are helpful in giving a broad picture of the size of the problem of child abuse in our State. Judged purely from the point of view of interest expressed and number of questionnaires returned by physicians, it is obvious that the medical profession in Hawaii is aware of and deeply concerned about this health program. The replies also provide clues to some of the needs in this community.

SUMMARY

Bearing in mind the limitations mentioned, the following generalizations may be made from the data obtained.

1. The problem of child abuse in terms of incidence alone is large enough to warrant serious concern and immediate remedial action.

2. Effective reporting of child abuse cases demands clearly established procedures. Using some of the suggestions obtained from replies to the questionnaire, the committee has proposed a law for adoption by the State. This statute would make mandatory reporting of child abuse cases to the Department of Social Services of the State, and would guarantee immunity from prosecution of the individual reporting.

3. There is a great need for more education and interpretation in the areas of:

 a. Factors underlying child abuse cases.
 b. Resources available to handle problems of child abuse.
 c. Procedures for optional handling of child abuse cases in each agency.

4. There is a great need to know more about factors of preventability. Any report of a case of child abuse means that we are acting too late in this instance.

CONCLUSIONS

Preliminary results of a questionnaire to physicians concerning child abuse cases are offered. The need to learn more about this problem is brought out and the factors of public education and prevention are heavily underscored. It is intended that this information be used for further interest, exploration, and study of this all too common disease. ■

REFERENCES

1. Silverman, F. N.: Roentgen manifestations of unrecognized skeletal trauma in infants, Amer. J. Roentgenol. 69:413 (Mar.) 1953.
2. Bain, K.: Child abuse and injury, Milit. Med. 130:747-49 (Aug.) 1965.
3. Fontana, V. J., Donovan, D., and Wong, R. J.: The "maltreatment syndrome" in children, New Eng. J. Med. 269:1389 (Dec.) 1963.
4. Kempe, C. H., Silverman, F. N., Steele, B. F., Droegmueller, W., and Silver, A. F.: The battered-child syndrome, JAMA 181:17 (July) 1962.

AMA ANNUAL CONVENTION

CHICAGO

June 26-30, 1966

REGISTRATION AND HOTEL INFORMATION

AVAILABLE THROUGH HMA OFFICES

Most patients with an abdominal aneurysm, regardless of age, should be operated upon: it's safer than waiting.

Abdominal Aneurysm: Graft Replacement vs. Nonsurgical Therapy

EDWARD K. LAU, M.D.,* and RICHARD K. S. PANG, M.D.,† *Honolulu*

• *Twenty men and five women have undergone resection of a fusiform aneurysm of the abdominal aorta at the authors' hands, and replacement of it by either a homograft (four cases, all prior to 1958) or a plastic prosthesis (DeBakey woven dacron graft in all but one case). Five died during or soon after surgery. Four died later, two of their disease and two of other causes. Neither age, sex, associated disease, nor condition of the aneurysm are regarded as contraindications. Elective resection is much safer than emergency surgery.*

DURING the years 1956 to 1964, twenty-five patients were operated upon by the authors for abdominal aneurysm. During this time, six other patients who were admitted to St. Francis Hospital under various other diagnoses died, were autopsied, and were proved to have had abdominal aneurysm.

These patients ranged in age from 54 to 84 years. The highest incidence occurred in the seventh decade of life. There were 20 men and five women, a ratio of 4:1.

The ethnic distribution was not remarkable: Caucasian 7, Chinese 5, Japanese 9, Hawaiian 0, Korean 1, Puerto Rican 1, and Filipino 2.

* Chief of Surgery, St. Francis Hospital.
† Thoracic and Cardiovascular Surgeon, St. Francis Hospital; former resident of Baylor University School of Medicine, Houston, Texas.
Received for publication April 22, 1965.

Most of these patients had high blood pressure. There were three patients with ruptured aneurysms in this series, and of these, two are still living.

The predominant underlying pathologic factor in aneurysm of the abdominal aorta is arteriosclerosis. We often found various other forms of vascular disease, e.g. cerebral vascular insufficiency, renovascular hypertension, arterial insufficiency of the lower extremities, and aneurysm of the thoracic aorta and major arterial branches.

Of particular interest was one individual who had an abdominal aneurysm resected, and six months later had his thoracic aneurysm resected.

Most patients with abdominal aneurysm admitted to the hospital during this period were treated surgically, except for three cases where operation was contraindicated by severe and disabling associated systemic disease: carcinoma of the esophagus with lymph node metastasis; severe pulmonary, cardiac, and renal disease; and idiopathic thrombocytopenia purpura with bleeding.

TREATMENT

All the aneurysms encountered were fusiform in type, and involved the entire aortic circumference, requiring replacement of the involved segment. When the aortic bifurcation was not involved, the aneurysm was treated by segmental aortic replacement. If the iliac vessels were patent and in fairly good shape, a bifurcation graft, with end-to-end anastomosis to the common or external iliac arteries, was performed. If the external iliac arteries

were obstructed, the limbs of the graft were brought down to the femorals and an end-to-side anastomosis made at the junction of the superficial femoral and profundus arteries. Twenty-five per cent of our cases required an aortofemoral bypass because of this.

In some instances, endarterectomy of the profundus artery was necessary to assure adequate distal flow. In only one case, with a segmental block of the superficial femoral and poor retrograde flow from the profundus artery, was it necessary to extend the graft as a bypass to the popliteal artery. Most of the aneurysms were completely excised. However, when we encountered a huge aneurysm, or one that had ruptured or which had a somewhat thick granulomatous wall, densely adherent to the inferior vena cava, the approach differed. Immediately after securing proximal and distal control, the aneurysm was entered and the mural thrombus and intimal layer within removed, leaving the outer layer of the aneurysm wall attached to the adjacent structures, especially the inferior vena cava.

In one earlier case, this particular knowledge not being available, massive bleeding and tearing of the inferior vena cava led to excessive blood loss and death of the patient on the operating table. At autopsy, acute myocardial infarction was found.

TYPES OF AORTIC REPLACEMENT

Four homografts were used in 1956 and 1957. The DeBakey woven dacron bifurcated graft has been our choice in 20 of 21 cases operated on since it became available. As this is less porous than the knitted grafts, there is less bleeding through the graft.

Teflon synthetic graft was used, when dealing with thoracic replacement or whenever we encountered bleeding or clotting problems with the knitted dacron graft.

ATHEROSCLEROTIC CONDITIONS

For severe occlusive disease of the superficial femoral and popliteal arteries, we have performed bilateral sympathectomy along with our aortic resections, though this has not been a routine procedure. We avoid endarterectomy of the iliac arteries and prefer to bypass the occlusive segment when possible, for fear that the shredded distal end of the intima may further dissect and occlude the vessel. We encountered this problem in several of our earlier cases, when it was necessary to reoperate to restore circulation through a bypass procedure.

We have not encountered any associated cerebral vascular disease, such as occlusive diseases of the internal carotid arteries, prior to or immediately after aneurysmal resection. Individuals manifesting clinical cerebral vascular or neurological deficits, prior to or at the time of admission, should have these corrected first; then, seven to ten days later, the abdominal aneurysms can be excised.

Associated lesions of the celiac axis, or superior mesenteric or renal arteries, should be treated at the same operation. In most cases, the bypass principle should be employed for mesenteric occlusion, and endarterectomy or patch graft angioplasty for renal artery occlusion.

The treatment of associated aneurysm of the thoracic aorta is dependent upon the nature of symptoms. In most cases, the abdominal aortic aneurysm should be taken care of first to prevent thrombosis, embolization and other complications which may result from or interfere with left atrial-femoral artery extracorporeal pump bypass, a technique frequently used to provide distal blood flow during the removal of a thoracic aneurysm. We did just this on one of our patients who had both a thoracic and an abdominal aneurysm. However, in the presence of symptoms of pending rupture, the thoracic lesion should be removed first. In some cases, according to DeBakey, both lesions should be removed at one operation or at a second operation on the same day because of rupture of the remaining aneurysm. In some cases, rupture and death occurred before the second operation could be performed, indicating the desirability of an aggressive approach to the problem of multiple aortic aneurysms.

RESULTS

Nine deaths occurred in this series, as listed below:

	TIME OF DEATH	
	0–30 days	*30 days to 8 years*
Atherosclerosis		2
Complications of Surgery	4	
Cancer	0	
Other	3	
9 Deaths	36% Mortality	
16 Survivals	64% Survival	

DEATHS DURING SURGERY

One death was due to graft complication—failure of blood to clot within the dacron graft, leading to massive bleeding, cardiac arrest, and death four hours after surgery. Diagnosis: afibrinogenemia.

Of the two deaths due to sudden rupture of the abdominal aneurysm, in one the correct diagnosis

was not made and the patient was treated for an acute renal shutdown. During the kidney decapsulation procedure, the operator suddenly realized that he was dealing with a ruptured abdominal aneurysm, occluding the renal arteries. Cardiac arrest occurred shortly afterward.

The other rupture of the aneurysm occurred immediately after anesthetic induction from cardiac arrest due to blood loss, and though the heart was resuscitated later and circulation reestablished after resection and graft replacement, cardiac failure ensued.

One death from cardiac failure after seven days was due to an acute thrombosis of the inferior mesenteric artery with gangrene of the left sigmoid colon secondary to an enlarging abdominal aneurysm.

One patient with both a thoracic and an abdominal aneurysm refused surgery for the thoracic after resection of the abdominal; three years later he died suddenly, suggestive of a sudden rupture of the thoracic aneurysm. No autopsy was performed.

Another patient developed an acute mesenteric thrombosis necessitating resection of a large segment of the small intestine, four years after the initial abdominal aortic resection. Of the other two deaths not related to the disease process, one occurred three months after surgery from chronic pulmonary emphysema with chronic urinary retention and uremia. Autopsy showed cardiorespiratory failure with uremia. The other patient died two years after aortic resection from an unknown cause. No autopsy was performed.

LONG-TERM RESULTS

Our survival rate of 64 per cent does not reflect the true five-year survival, because some of these cases have been followed less than five years.

DeBakey's experience of 1,449 patients with aneurysm of the abdominal aorta, in whom follow-up results ranged from one to 11 years, has revealed a five-year survival rate of 58 per cent and a ten-year survival rate of 30 per cent. This is in contrast to the survival rate in the natural course of the disease as evidenced in the studies reported by Estes and Wright, whose combined data for nonresected cases showed a five-year survival rate of only 9 per cent and a ten-year survival rate of zero.

DISCUSSION

Going back to our records for the past eight years, there were six other abdominal aneurysm cases admitted to St. Francis Hospital. For various reasons, these were not operated upon. Only one other operative case was recorded.

This was a 66-year-old Hawaiian-Caucasian woman admitted to the hospital in shock with 80/60 blood pressure. Previous blood pressure was 200/136. She complained of severe abdominal pain, with findings of a large, tender, pulsating abdominal mass. At surgery, two hours after admission, she was found to have a ruptured abdominal aneurysm. During surgery 15 units of blood were used and subsequently in the recovery room four additional pints of blood were given. The patient expired 12 hours after surgery. Autopsy showed 1,000 cc of blood in the abdominal cavity and 800 cc of recent blood clots in the intraperitoneal space.

NONOPERATIVE CASES

A 76-year-old Filipino man had repeated episodes of congestive heart failure with severe asthma. He was scheduled for an operation which was cancelled because of poor medical risk evaluation. There has been no follow-up.

A 78-year-old woman had an intertrochanteric fracture of the left femur. On the fifth postoperative day after hip-nailing, she suddenly expired. Autopsy revealed a ruptured abdominal aneurysm with massive intraperitoneal hemorrhage.

A 74-year-old Caucasian man was admitted complaining of severe abdominal pains and difficulty in breathing. Blood pressure was 60/40 and pulse, 124. A provisional diagnosis of renal calculus was made. Two hours before death, cyanosis of the leg, with no distal pulses, was noted. Although a ruptured abdominal dissecting aneurysm was suspected, the consulting surgeon recommended no surgery because of the poor condition of the patient. Autopsy showed atherosclerotic aneurysm of the thoracic and abdominal aorta with rupture of an abdominal aneurysm.

In a 60-year-old Korean woman, an abdominal aneurysm was found during splenectomy for idiopathic thrombocytopenia. Nothing was done for the aneurysm. She expired later from causes not related to the aneurysm.

A 54-year-old Chinese man had an esophagectomy for carcinoma of the esophagus. An abdominal aneurysm of moderate size was found during surgery. The aneurysm was left alone, and the patient was treated with radiation therapy for the carcinoma. He died with generalized carcinomatosis four months later.

A 75-year-old Hawaiian-Caucasian man died of congestive heart failure with bronchopneumonia. Autopsy showed two 3 x 2 cm abdominal aneurysms.

A 70-year-old Chinese man had duodenal obstruction from an enlarged abdominal aneurysm. A posterior gastroenterostomy was performed to

relieve obstruction in October, 1960. Three and a half years later he was still alive.

COMPLICATIONS OF SURGERY

Arterial insufficiency in the colon following resection of abdominal aortic aneurysms have been reported by Bernatz[1] and Smith.[2] The anatomic basis for this complication may be congenital variations in collateral blood supply to the left half of the colon or reduction of blood flow through normal collateral channels due to occlusive disease. Normally the left colic branch of the inferior mesenteric artery communicates with the marginal branch of the middle colic artery, arising from the superior mesenteric. Further, the superior rectal branches of the inferior mesenteric communicate with the hemorrhoidal branches of the internal iliac arteries. One or more of these collateral pathways may, however, be congenitally absent or obliterated by disease.

Congenital absence of anastomosis of the middle colic artery occurs in about 20 per cent of cases. Inadequate communication of the inferior mesenteric with the marginal artery or hemorrhoidal arteries may lead to variable degrees of ischemia of the left half of the colon when the inferior mesenteric artery is ligated. Further, the presence of atheromatous occlusive disease in either the superior mesenteric or internal iliac artery may be compounded by thrombosis of the mesosigmoid arteries as a result of prolonged and excessive retraction.

The clinical evidence of ischemia of the left half of the colon ranges from diarrhea with spontaneous recovery to moderate to severe rectal bleeding, infarction with perforation, peritonitis, and death. Sigmoidoscopy is the most important diagnostic tool. Signs of infarction warrant reexploration with resection of involved intestine.

Says DeBakey[3] in his editorial comments: "It is difficult to conceive the exceedingly high incidence of 10 per cent complication of this condition following aortic surgery reported by Roger F. Smith and D. Emerick Szilagyi. We have only rarely observed this complication in more than 1,000 cases of aneurysm of the abdominal aorta treated by resection and graft replacement. This complication represents primarily a technical error and the incident reported of 10 per cent is exceedingly high and difficult to justify on the basis of anatomical variation."

Aortoenteric fistula was reported in 70 cases by Humphries[4] from the Cleveland Clinic. The most common site of fistula was the duodenum (80 per cent); fistula of jejunum and ileum was found in 20 per cent. Aortoenteric fistula must be considered in any patient presenting with hematemesis or melena in whom an aortic graft replacement has previously been done. Renal failure may result from cross-clamping of the abdominal aorta distal to the renal vessels.

Nanson[5] states that one of the recognized complications of the excision of abdominal aortic aneurysm has been oliguria in the postoperative period. This may progress to frank anuria and, as a result of this, a significant number of deaths from renal failure have been reported. In their experimental studies, clamping of the abdominal aorta in a dog, distal to the renal artery, produced renal tubular damage and depression of urinary output. Ganglionic block or infiltration of the renal pedicles with xylocaine during clamping of the abdominal aorta prevented the tubular damage and depression of renal function.

This conclusion conflicts with those of the laboratory and clinical observations by DeBakey[6] and his group. He states that there is little or no significant alteration in renal function associated with clamping of the aorta just distal to the renal arteries, and that the changes in renal function following abdominal aortic surgery are related to technical factors involved in surgery. This clinical impression has been substantiated by the studies of Beall[7] using discrete renal function measurements including vascular resistance and excretion of water and electrolytes. This study did demonstrate, however, that it is probably advantageous to insure adequate hydration of the patient before and after aortic surgery.

SUMMARY

Our experience, like that of others, indicates that arterial reconstruction operations can be safely employed in the majority of patients with abdominal aneurysm regardless of the condition of the aneurysm, age, or sex, and in the presence of associated disease.

ADDENDUM

Since preparation of this paper, four additional patients have survived surgery for abdominal aneurysm. ■

1374 Nuuanu Ave.

REFERENCES

1. Bernatz, P. E.: Necrosis of colon following resection of abdominal aortic aneurysm, Arch. Surg. 81:373-378 (Sept.) 1960.
2. Smith, R. F., and Szilagyi, D. E.: Ischemia of colon as complication in surgery of abdominal aorta, AMA Arch. Surg. 80: 806-821 (May) 1960.
3. DeBakey, M. E.: Yearbook of Surgery: 1960-1961 series, page 253. Editorial comments.
4. Humphries, A. W., Young, J., LeFevre, J., and DeWolfe, V.: Complication of abdominal surgery, Arch. Surg. 86:43-50 (Jan.) 1963.
5. Nanson, E. M., and Noble, J. G.: Effect on kidneys of cross-clamping abdominal aorta distal to renal arteries, Surgery 46: 388-395 (Aug.) 1959.
6. DeBakey, M. E.: Yearbook of Surgery: 1964-1965 series, page 342. Editorial comments.
7. Beall, A. C., Jr., Cooley, D. A., Morris, G. G., Jr., and DeBakey, M. E.: Perforation of arteriosclerotic aneurysms into inferior vena cava, Arch. Surg. 86:809-817 (May) 1963.

HAWAII MEDICAL JOURNAL

Editorials

Parameter

One of the *Lancet's* Peripatetic Correspondents suggested a year or two ago in a delightful little article that the word "parameter" was foisted upon the medical profession by an evil old word-merchant because a medical writer complained to him that the last vogue word he had gotten from him —serendipity—was getting pretty threadbare, and didn't puzzle anybody any more. Said the old word-merchant, "I have just the word for you: it looks so simple, everyone who sees it will be sure he ought to know what it means, from his high school Latin, and no one will have the courage to admit it if he doesn't, even though almost no one will understand it. The word is 'parameter.' "

The most concise definition of "parameter" appears to be "quantity constant in case considered, but varying in different cases."[1] One Webster[2] says it's "a quantity to which the operator may assign arbitrary values, as distinguished from a variable, which can assume only those values that the form of the function makes possible."

Webster III says it's "an independent variable through functions of which other functions may be expressed."

Mr. O'Leary, upon whom Dr. Joseph Garland of the *New England Journal of Medicine* relies for these matters, just says it means "independent variable" (and, of course, he can prove it). Dr. Garland himself says "it's a lovely word, but getting shopworn," and he adds, "I don't understand it."[3]

Well, we don't understand it, either. We can hardly understand "independent variable"; at least, we couldn't distinguish it from a dependent variable. What's more, we don't believe over one man in ten who writes or says "parameter" understands it.

We think it is being used, most of the time, as an impressive substitute for a simple, homely, lucid word like "dimension," or "factor," or "measure." Perhaps, some of these times, it really is an "independent variable"—whatever that may be. Even if it is, this seems like a poor excuse for being obscure.

1 The Concise Oxford Dictionary of Current English, ed. 4, Oxford, 1952.
2 Webster's New Collegiate Dictionary, G. & C. Merriam, 1956.
3 Garland, J.: Personal communication, 1966.

Dispensing the Samples*

The samples you get from drug companies are intended for one purpose: to be given to patients as a trial. However, if no written prescription accompanies the sample, the transaction looks like the dispensing of a home remedy; or looks as if the patient is being used as a guinea pig. Common sense suggests that the sample should be accompanied by a written prescription for the same item.

It might be best to tell the patient: "This is a sample of a new (or a good old) medicine that has had some fine results. If it is as favorable as I expect it to be, take the prescription to your neighborhood drug store so you can get more of this medicine. If you are disappointed in the results, call me."

This simple procedure will prevent the embarrassment of an otherwise satisfied patient trying to get the drug without a prescription. It will lift the medication into the dignified "prescription" class rather than make it look like a casual free sample. It indicates that the doctor is not going out on a limb, calling it a wonder drug. And it acts as an automatic (if not entirely scientific) check on the effectiveness and safety of a new drug.

* Reprinted from the Journal of the Medical Society of New Jersey 62:12 (Dec.) 1965.

HAWAII MEDICAL JOURNAL

This Is What's New!

• An asthma study carried out in New Orleans in October, 1963, was designed to study the relationship of **air pollution** to **asthma attacks.** By using such techniques as photoelectric particle counters, ion counters, and so forth, the investigators found that large particles showed no significant variation in respect to asthma while **smaller particles,** less than 20 microns, had significant **positive correlation.** Air ions had negative correlation with asthma. (*Arch. Environ. Health* [Mar.] 1966.)

• **Aminocaproic acid** is being used in London for the control of **hemorrhage after prostatectomy.** The drug antagonizes urokinase; and reduces hemorrhage but apparently does not cause increased incidence of thromboembolic phenomena. (*Lancet* [Jan. 29] 1966.)

• **Left-to-right cardiac shunts** can be demonstrated by the use of the isotope **technetium-99m.** The procedure can be carried out very easily in outpatients. (*Thorax* [Jan.] 1966.)

• The flaming cells found in some cases of **multiple myeloma** owe their distinctive coloration to the presence of an abnormally large quantity of glycoproteins, according to Mayo investigators. (*Amer. J. Clin. Path.* [Dec.] 1965.)

• **Pressurized suits** designed for high altitude flying increase the temperature and metabolic rate of fliers. The **cooling system** of such suits was found to be marginal in light work and **inadequate** for heavier work. The subjects stored the excess heat and the metabolic rates ran about twice as high as those of subjects wearing unpressurized suits. (*Aerospace Med.* [Sept.] 1965).

• **Indomethacin** as used in Switzerland in a dose of 50 to 400 mgm daily produced the best results in **ankylosing spondylitis, osteoarthritis,** and **gout.** About half of rheumatoid patients had some degree of improvement. Some side effect was noted in approximately 44 per cent of the patients, but in only **eight per cent** was treatment stopped because of severe **side effects,** such as dizziness, gastric pain, and vomiting. (*Schweiz. Med. Wschr.* [Dec. 11] 1965.)

• Karnofsky of Sloan-Kettering reviews some of the problems encountered in **cancer chemotherapy** research. The variable response of tumors arising from the same and different sites, and the individual response requiring separate analysis, make drawing general conclusions extremely difficult (*Cancer* [Dec.] 1965.)

• **Bundle branch block** discovered at the time of acute myocardial **infarction** is associated with **twice the mortality** observed in patients with infarcts without blocks. (*British Heart J.* [Sept.] 1965).

• **Sauna baths,** long used in Scandinavia and recently introduced to Hawaii, cause a decrease in sperm count, with a slight increase in **sperm cell abnormalities** after rather excessive sauna baths over a two-week period by 12 Finns. (*Int. J. Fertil.* [Oct.-Dec.] 1965.)

• Less and less good is being said about **gastric freezing,** which was a somewhat popular treatment for duodenal ulcers about two years ago. Four Minnesota physicians report **failure** in more than **nine out of every ten** cases of duodenal ulcers treated by gastric freezing. (News Release from the American Medical Association [Jan. 7] 1966.)

• A Honolulu investigator finds the **radio rose bengal** (iodine-131) extremely helpful in differentiating surgical from nonsurgical jaundice. The test is most helpful if used during the early stages of jaundice, particularly to **rule out surgical jaundice** by demonstrating **biliary tract patency.** (*JAMA* [Nov. 29] 1965.)

• **Cyclophosphamide** has been beneficial in the treatment of **oat-cell carcinoma** of the cronchi. It has been valueless in other types of bronchial carcinoma. Oral or IV route may be used, but the recommendation is to try the drug IV if the oral route fails. (*Thorax* [Nov.] 1965.)

• Of 18 patients with **gallstones** without overt evidence of diabetes mellitus, 15 had a **diabetic tolbutamide response** and two had other findings **suggestive of diabetes.** (*Schweiz. Med. Wschr.* [Jan. 15] 1966.)

FRED I. GILBERT, JR., M.D.

Fluoridation is dead. Long live fluoridation!

Yes, it is dead once more—fluoridation of the public water supply in Hawaii—dead in committee of the 4th State legislative session just past. But, the issue is not dead.

One should not impugn the motives of the persistent fluoridationists. They are do-gooders and they mean well.

Their purposes can be challenged, however, and their cries of indignation at losing, their striking out in all directions with invective, is evidence enough of their failure to date to convince our representatives, the legislators, of the worth of fluoridation.

The arguments pro and con have been lengthy and verbose. "Protect us from more of the same!" says the gentle reader; "but, sir, this is an obituary!" So, please hear me out.

I really don't care whether the "F" ion is food or poison, nutrient or medication. I really don't believe it will poison me.

I also don't believe weighted statistics that purport to prove a benefit of a mere 60 per cent to a very small number of small children, whose neglectful parents ignore intensive campaigns to educate them in the health care of their soda-sucking offspring.

What concerns me is a matter of rights.

My mother made me eat my vegetables and clean up my plate. She may have made me take my vitamins too. She was my parent; I was a dutiful son. Anyway, I had no rights in those days. I did as I was told and took "what was good for me." I was terribly shocked later to discover that my medical school roommate, quite healthy and well-built, had never eaten a vegetable in his life, nor had he had a vitamin pill.

Despite gentle extension of mothering, at adulthood I resisted gently, but assumed the rights of a full-fledged citizen of a free country. Among these was the right not-to-be-done-good-to. This right, of course, is bounded by the limits of possible harm to my fellow man.

In the matter of fluoridation, if you wish to protect your teeth, or those of your offspring, go right ahead and take the "F" ion, or dish it out to your children. But, you do not have the right to make *me* take a nutrient if you wish to call it that, or force it upon *my* children.

If you accuse me of being heartless in denying "millions" the beneficent effect of fluoridation, I say to you three things: (1) The benefit may be much smaller and less important than is alleged and the problem may be grossly exaggerated by false statistics. (2) Why should I suffer for, or pay for, the inadequacies of others? (3) Why should we blanket the waters of the land with additives, for the sake of counteracting the effects of the carelessness, ignorance, or even misfortune of a few?

It seems to be a failing of ours, of our democracy, that in order to correct the shortcomings of a few, we must needs pass laws that will affect the many.

Fluoridation of the public water supply may, I say "may" advisedly, improve the dental caries rate of a relatively small number of neglected children to a limited extent, and perhaps for only a part of their lives. In so doing, the program will burden us all with another increment in taxation. The cost will be far beyond estimates and far above benefits to be derived. In the meantime, another link in the chain of socialization, the "we-know-what's-best-for-you" philosophy, will have been forged and another liberty lost.

If fluoridation ever becomes a mandate of the law, the basic problem: Neglect, Ignorance, Carelessness, will not have been buried by it. The do-gooders, nevertheless, may well carve an epitaph over the empty grave: "We used a cannon to shoot at a gnat. Maybe the gnat will go away."

J. I. Frederick Reppun, M.D.
Secretary

HAWAII MEDICAL JOURNAL

Perinatal Death Study

The mother, a gravida 2, para 2, in her twenties, delivered her first child after a labor of 9 hours and 10 minutes. Prior to the delivery of that infant there was a question of fetal distress, because of the presence of meconium in the amniotic fluid. Other than a weight gain of 28 pounds during that pregnancy, there were no apparent abnormalities.

The mother's second pregnancy was apparently uncomplicated, except for excessive weight gain of over 40 pounds during the antepartal period.

ANTEPARTUM

She was admitted to hospital at term, in early labor. Her contractions had begun about two hours before admission.

The interspinous diameter measured 26 cm, the external conjugate 20 cm, and the diagonal conjugate 15 cm. Hemoglobin was 13.0 gm and WBC 12,450, with 1 stab, 89 segs, and 10 lymphocytes. Hematocrit was 37 volumes %. Urinalysis: albumin 2+; sugar negative; microscopic showed 30-40 white blood cells, occasional red blood cells and many finely granular casts.

On admission, 20-second contractions were occurring every two to five minutes. The cervix was three cm dilated and the presenting part was at "minus-one" station. Thirty minutes following admission the cervix was four cm dilated; strong contractions lasting 40 to 50 seconds occurred every two minutes. Forty-five minutes following admission the cervix was five to six cms dilated and the presenting part still at "minus-one" station. Fifteen minutes later the patient was given Demerol 50 mg and scopolamine grains 1/150 IM nium-stained amniotic fluid was obtained. Fifteen for pain. One hour and 25 minutes following admission the cervix was seven to eight cm dilated and the presenting part was at "zero" station.

DELIVERY

The patient was taken to the delivery room 1 hour and 30 minutes following admission. Twenty-five minutes subsequently the membranes were ruptured artificially and abundant slightly meco-minutes following rupture of membranes vaginal examination revealed a rim of cervix around the fetal head and the presenting part was found to be in ROT position and was described as being in "high arrest." Kjelland forceps were applied at this time in an attempt to rotate the fetal head from ROT to ROA. During this maneuver the umbilical cord prolapsed out of the uterus and the fetal heart tones became and remained inaudible soon thereafter.

Fifteen minutes following forceps application, a consultant recommended emergency cesarean section because of "fetal distress and LOP position of the fetal head."

The preoperative diagnosis was "a dead infant from asphyxiation from cord prolapse." A classical cesarean was performed under general anesthesia and a nine lb. four oz. stillborn infant was delivered approximately twenty-five minutes later.

POSTPARTUM

Because of profuse blood loss during cesarean section, the patient was given two units of blood, and prophylactic antibiotic therapy was started because of possible uterine contamination from the vaginal procedure. She was given 500 mg of Chloromycetin intramuscularly stat and 250 mg every six hours. Vital signs prior to the cesarean section were blood pressure, 120/60; pulse, 86, and respirations, 24. Following the section, the blood pressure was 95/65, pulse 130, and respirations 25. Postoperatively the patient's temperature spiked 100° to 101° every afternoon. Urinalysis on the first postpartum day revealed 1+ albumin, negative sugar, moderate acetone, 8-10 WBC and 25-35 RBC, and occasional coarsely granular casts.

On the fourth postpartum day the WBC was 6,900, hemoglobin 10.4, hematocrit 36; differential showed 3 stabs, 68 segs, 23 lymphs, and 6 monos. Aside from slight distention of her abdomen, the patient tolerated oral feedings beginning in the evening of the operative day. She was discharged on her seventh postoperative day on 150 mgm Declomycin q.i.d. Her temperature at the time of discharge was 100°.

CLASSIFICATION

The Committee classified this case as being a directly obstetrical death and preventable from a practical point of view. The factor of responsibility was the attending physician.

continued page 424

HAWAII MEDICAL JOURNAL

In Memoriam – Doctors of Hawaii

This is the sixty-first installment of In Memoriam—Doctors of Hawaii.

Howard Clarke

Howard Clarke was born in New Orleans, Louisiana, on November 22, 1883, the son of Robert and Emogene (Lockwood) Clarke.



DR. CLARKE

He was graduated from Tulane University Medical School in 1903. During his college days he played fullback on the Tulane eleven for three years and was selected for the All-American and All-Southern teams in 1903. In 1905 Dr. Clarke completed his internship at Charity Hospital in New Orleans.

Following a trip abroad, he returned to New York where he practiced until 1910 when he joined the Army Medical Corps. While living in New York, Dr. Clarke was a member of the visiting staff of the New York Eye and Ear Infirmary, serving under Dr. Wilbur M. Marple. He was also on the visiting staff of the Manhattan Eye, Ear, Nose and Throat Hospital under Dr. Lewis A. Coffin. During this period, the doctor was a member of the 7th regiment of the New York National Guard.

Dr. Clarke was married to Miss Eleanor Tracy, and they became the parents of two sons, Samuel Tracy and Howard, Jr.

Rufus H. Hagood

Rufus H. Hagood was born November 21, 1887, at Birmingham, Alabama, the son of Rufus H. and America (Walker) Hagood.

He received his education in the public schools of Birmingham. He attended Washington and Lee University and received his M.D. degree from Jefferson Medical School, Philadelphia, in 1911. His internship was served from 1911 to 1912 at Pennsylvania Hospital.

Dr. Hagood married Anita Pettit at Philadelphia on November 15, 1912. The couple had four children: Rufus H., III, Charles Pettit, Ruth H., and Robert Walker Hagood.

In 1913 Dr. Hagood became assistant superintendent of the Eastern Oregon State Hospital for the Insane at Pendleton, Oregon.

Entering the medical division of the U. S. Army in 1914, Dr. Hagood was graduated from the Flight Surgeons School, Medical Research Laboratory, Air Service, U.S.A., at Mineola, Long Island. Before World War I he was stationed at various posts in the United States. For the duration he was Sanitary Inspector, port of embarkation, Hoboken, New Jersey. In 1919 Dr. Hagood was assigned to Hawaii with the rank of major and was the first flight surgeon to be stationed here.

The following year Dr. Hagood resigned from the service and became physician for the Makee Sugar Company at Kealia, Kauai, a post he held for four years.

In 1924 he took postgraduate work at Rochester, Minnesota. Returning to Honolulu the same year, Dr. Hagood entered private practice, specializing in diseases of the eye, ear, nose, and throat.

Dr. Hagood was active in Democratic politics and in civic affairs. In 1928 he was a candidate for the legislature from the fourth district. In 1929 Governor Judd appointed him a member of the Territorial Aeronautics Commission.

He took a prominent part in the Democratic campaigns of 1930 and 1932, and was a member of the Territorial Central Committee of the party and one of the organizers, and once president, of the Jefferson Club. Dr. Hagood was an outstanding contender for the governorship of Hawaii in the race which terminated in the selection of Joseph B. Poindexter.

In 1933 he was appointed Assistant City Physician.

Dr. Hagood died in Honolulu on February 1, 1934, at the age of 46, of coronary heart disease.

He was a 32nd degree Mason, a Shriner, an Elk, and a member of the American Legion and the Pacific Club.

At the time of his death Dr. Hagood was a Lieutenant Colonel in the army reserves, and at his funeral army planes flew in formation dropping leis as his body was borne from the chapel.

Frank Barnard Sutliff

Frank Barnard Sutliff was born on February 16, 1852, near Albany, New York, the son of Timothy Mulford and Martha Barnard Sutliff. During his adolescent years he worked as a deck hand on Hudson River boats plying between Albany and New York. As he approached manhood, he was greatly influenced by a Dr. Wade, who lived nearby. Dr. Wade became his preceptor in medicine, and before entering medical school he had a little room over the doctor's office where he spent hours not only in the study of medicine but also in reading the English classics. He entered Albany Medical College where, as was customary at that time, medical lectures took up only four months of the year; the rest of the time he spent with his preceptor. He graduated from Albany Medical College in the class of 1878.



DR. SUTLIFF

Dr. Sutliff began his practice at Burnt Hills, near Albany, but after a short time he went west to Butte, Montana. One of the doctor's favorite stories concerned a baseball game which was played a few days after his arrival in Butte. While he was in the general store, talk turned to the impending game. During the conversation the Methodist minister came in and was introduced to Dr. Sutliff. He was followed by the gaudily dressed madam of the town's favorite bawdy house. The game was due to begin, so the storekeeper locked up and drove the new doctor, the minister, and the madam to the game in his delivery wagon.

From Butte he moved to Winters, California, where he met his future wife, Miss Helen Briggs. While in Winters he received an appointment as government physician on the Island of Maui. On August 22, 1884, Dr. Sutliff arrived in Honolulu aboard the S.S. "Alameda" and very shortly thereafter began his practice at Wailuku, Maui.

Together with Dr. Bailey he attended Dr. Frank Enders of Wailuku in his final illness, and in January, 1885, the Board of Health appointed Dr. Sutliff government physician for the Wailuku district to succeed Dr. Enders. The following year the Board of Health also named him physician for the Malulani Hospital in Wailuku. He held both positions until he left the Islands.

In the meantime, Miss Briggs had come to Hawaii to visit her sister who was married to Dr. John Brodie, a prominent physician in Honolulu. Dr. Sutliff and Miss Briggs were married June 9, 1885, at the home of the Brodies, and from Honolulu the doctor took his bride to Wailuku. Two daughters, Nina (Mrs. Fontaine Johnson) and Helene (Mrs. William B. Parker) were born to the doctor and his wife while they were on Maui.

Dr. Sutliff was once called on to treat Queen Liliuokalani during one of her visits to Maui. He was much interested in the folklore of the Hawaiians and also became fluent in the language. On one occasion when he was new on Maui and was just learning the language, he gave instructions to a patient, in Hawaiian, to take one pill *(huale)* after each meal. The patient kept shaking his head and finally he was told that if he wouldn't follow orders, he could get out. The patient left but returned with the sheriff, who asked the doctor to repeat his instructions. Whereupon Dr. Sutliff learned that what he had actually told the patient was to swallow a white man *(haole)* after every meal!

Leaving the Islands in June, 1888, aboard the S.S. "Australia," the doctor and his family went to California. Dr. Sutliff settled in Sacramento where he became associated with Dr. Gustavus L. Simmons. A very close friendship grew up between these two men, which lasted until Dr. Simmons' death. After a short time, Dr. Sutliff opened his own office and soon numbered among his patients many prominent Sacramento families.

Keenly interested in good and progressive medicine, Dr. Sutliff was an active member of the Sacramento Society for Medical Improvement for many years. In April, 1892, he read a paper before the Society entitled, "No Paper," in which he took to task those members who gave that familiar excuse when asked to participate in the scientific programs. From 1896 to 1897 Dr. Sutliff served as president of the Society. He is characterized in "Memories, Men and Medicine" by Dr. J. Roy Jones as "a dignified, meticulous gentleman, replete with a facetiousness and story-telling capability that ingratiated him to all." From the Society's minutes of the annual banquet in March, 1911, comes the statement that he presided as toastmaster at the event with "the wit and humor for which Dr. Sutliff is known." He was also president of the Civic League from 1911 to 1912.

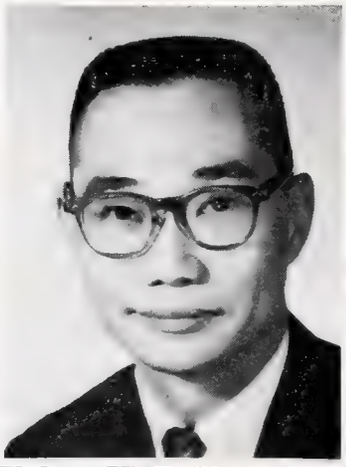
Retiring from active practice in 1917, Dr. Sutliff lived very quietly until his death in Sacramento on February 11, 1942, at the age of 90.

HAWAII MEDICAL JOURNAL

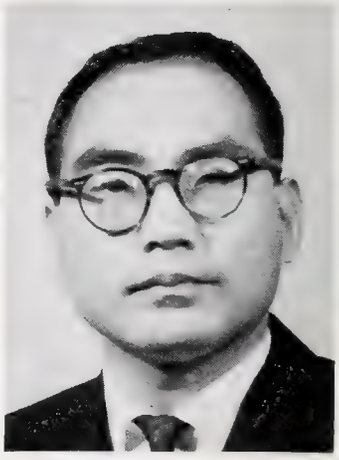
New Members



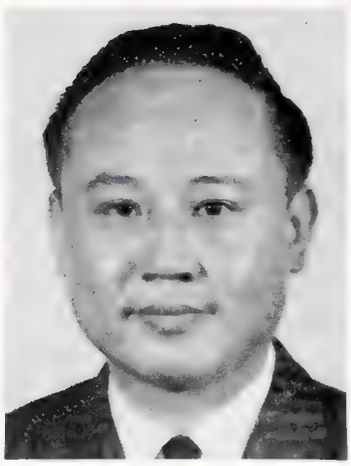
Edward H. Izawa, M.D.
1010 South King Street, Suite 404
Honolulu, Hawaii 96814
GENERAL SURGERY
George Washington University Medical School—1957
Internship—George Washington University Hospital—1957-1958
Residency—George Washington University Hospital and Affiliated Hospitals—1958-1964
Allegheny Hospital—1963-1964
Baylor University Hospital—1964-1965



Walton K. T. Shim, M.D.
1481 S. King Street, Suite 524
PEDIATRIC SURGERY
Dartmouth College; Dartmouth Medical School; Columbia University College of Physicians and Surgeons—1956
Internship—New York Hospital—Cornell Medical Center—1956-1957
Residency—New York Hospital—Cornell Medical Center—1957-1958
E. J. Meyer Hospital, University of Buffalo—1958-1962
Children's Memorial Hospital—(Chicago)—1964-1965
1964-1965
Instructor in Surgery
Northwestern University—1965



Keiichi Goshi, M.D.
94-801 Farrington Highway
Waipahu, Hawaii 96797
INTERNAL MEDICINE
Kobe Medical College—1949
Internship—Kobe Medical College Hospital—1949-1950
St. Francis Hospital—1955-1956
Residency—Allergy, Medical College of Virginia—1956-1957
Medicine, St. Francis Hospital—1957-1958
Medicine, Sinai Hospital of Baltimore—1958-1959



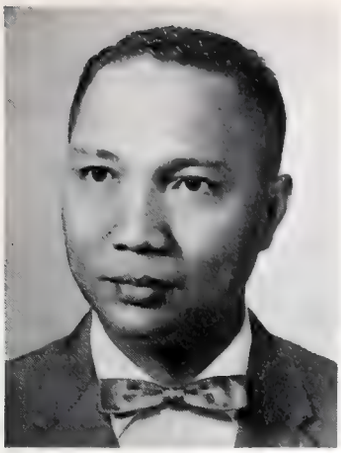
Andre Bernard Choan, M.D.
1697 Ala Moana Blvd.
Honolulu, Hawaii 96815
PEDIATRICS
University of Paris (Sorbonne)—1955
Internship—Suburban Hospital, Bethesda, Maryland—1958-1959
Residency—Children's Hospital of the District of Columbia—1959-1962
Kauikeolani Children's Hospital—1962-1963



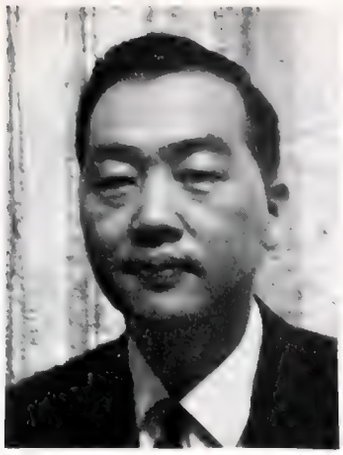
Steve R. Mahaffy, M.D.
1697 Ala Moana Blvd.
Honolulu, Hawaii 96815
OPHTHALMOLOGY
George Washington University School of Medicine—1947
Internship—Gorgas Hospital, Ancon Canal Zone—1947-1948
Residency—Gill Memorial Eye, Ear & Throat Hospital, Roanoke, Va.—1948-50
Gorgas Hospital—1950-1952



Arthur Yale Sprague, M.D.
888 South King Street
Honolulu, Hawaii 96813
ANESTHESIOLOGY
Johns Hopkins School of Medicine—1960
Internship—Johns Hopkins Hospital—1960-1961
Residency—Hospital of University of Pennsylvania—1961-1962
U. S. Naval Hospital, San Diego—1962-1963



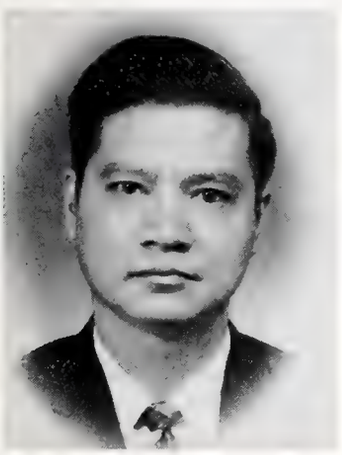
Jose L. Romero, M.D.
6 Central Avenue
Wailuku, Maui 96793
GENERAL SURGERY
College of Medicine, University of the Philippines—1956
Internship—Philippine General Hospital—1955-1956
St. Anthony's Hospital, Louisville—Residency—General Surgery, 1956-1957
University of Louisville Hospitals, Louisville, Kentucky—1957-1962



John Ho Choon Kim, M.D.
1697 Ala Moana Blvd.
Honolulu, Hawaii 96815
INTERNAL MEDICINE
Howard Medical School—1958
Internship—Los Angeles County Hospital—1958-1959
Residency—Cedars of Lebanon Hospital—1959-1962



Ellis Feer Devereux, M.D.
1531 South Beretania Street, Rm. 204
Honolulu, Hawaii 96814
PSYCHIATRY
Johns Hopkins University School of Medicine—1943
Internship—Johns Hopkins Hospital—1943-1944
Residency—Hillside Hospital—1950-1952



Hau Ngoc Vu, M.D.
1697 Ala Moana Blvd.
Honolulu, Hawaii 96815
OBSTETRICS-GYNECOLOGY
George Washington University School of Medicine—1961
Internship—St. Elizabeth Hospital, Youngstown, Ohio—1961-1962
Residency—St. Elizabeth Hospital, Youngstown, Ohio—1962-1965



George F. Parker, M.D.
3810 Leahi Avenue
Honolulu, Hawaii 96815
ANESTHESIOLOGY
State University of Iowa—1936
Internship—University of Iowa Hospitals 1936-1937
Residency—Indiana University Medical Center—1951-1953



H. C. Nordstrom, M.D.
580 North Kalaheo Avenue
Kailua, Hawaii 96734
GENERAL PRACTICE
University of Michigan School of Medicine—1944
Internship—USNH Parris Island, South Carolina—1944-1945



Wayne Stevenson Limber, M.D.
1697 Ala Moana Blvd.
Honolulu, Hawaii 96815
INTERNIST
University of Vermont—1953
Internship—Upstate Medical Center, Syracuse, N. Y.—1953-1954
Residency—Upstate Medical Center, Syracuse, N. Y.—1954-1955
Southern Pacific Hospital, San Francisco—1957-1958
Kaiser Hospital, San Francisco—1958-1959

HAWAII MEDICAL JOURNAL

County Society News

Hawaii

Drs. George Mills, Wilbur Lummis, Keith Kuhlman, plus Dr. Pitsu were guests at the March 31 meeting. After a preliminary discussion on Workmen's Compensation, the visiting doctors spoke on the main topic, Utilization Committees. The Department of Health will send out a suggested plan for Utilization Committees, but the written plan of the hospital committees is required by April 30. After a general discussion on medicare led by Dr. Mills, Dr. Paul Caldwell gave a paper on menopause. The meeting closed after Dr. Best announced the availability of special prescription blanks which provide for a 30% discount on medication for indigent cancer patients.

* * *

Mr. Richard Moody, who spoke on "Experiences in Social Learning," was a guest at the April 21 meeting. A petition from Dr. Reppun relating to nonparticipation in medicare was circulated. No action was taken. Dr. Donald Char will be in Hilo in May and has asked for an opportunity to talk about health services for the Hilo Campus of the University of Hawaii. A discussion on review committees developed a plan for a change in By-laws to provide for a county Utilization Review Committee and the appointment of another committee to act as a Review Committee for Part B of PL 89-97. It was voted to reimburse Dr. Miyamoto for his transportation costs to the HMA Annual Meeting. The HCMS delegates, Drs. Mitchel, Loo, and Wipperman, received instructions from the members. The following announcements were made: The Hawaii Heart Association has prophylactic penicillin available. Dr. Musser is now practicing in New York. Dr. B. A. Richardson was chosen as the nominee for the position of President-elect of the HMA. It was voted to follow the letter of the Bylaws with reference to the dues of seven members which had not been received.

Honolulu

A film on "Cancer of the Colon and Rectum" was shown before the meeting was called to order at 7:30 P.M., March 1. One new member, George F. Parker, was welcomed by the President. Dr. Roy Iritani introduced the guest speaker, Mr. Fred W. Bennion, who presented a talk on "Tax Aches." Dr. William Goebert announced plans for a new liberal arts college on Windward Oahu. Dr. Lowrey reported on an exchange of correspondence with HMSA. Dr. Chew Mung Lum read an anonymous letter he had received which criticized the Society. Dr. L. Q. Pang reported on the HMSA Medical Committee, from which he recently resigned. The Society voted to accept the four points presented by Dr. Lowrey as the conditions for future HMSA negotiations; to wit, (1) that HMSA recognize the Medical Society as the spokesman for the doctors, (2) that HMSA secure prior approval of the proper medical society committee before any insurance program is presented for sale to the public, (3) that HMSA accept a Review Committee of the Society, and (4) that HMSA accept the principle of a predetermined simultaneous termination of the master and individual contracts.

A progress report on the Foundation was made by Dr. Mills who also announced the role of Aetna Life Insurance as the fiscal intermediary for Part B of the medicare program in Hawaii. Mr. Thorson reported that the Board of Governors had accepted the recommendation to accept Brainard & Black's proposal to update the Society's group accident and sickness insurance program.

* * *

Following a film presentation on "Moles and Melanomas," the April 5 meeting was called to order by the President. Approximately 170 members were present. New members Andrew B. Choan and Steve R. Mahaffy were introduced. The speaker for the evening, Mr. McKay McKinnon, Jr., Director of the San Francisco District of the Food and Drug Administration, spoke on "Drug Abuse Control." Announcements were made concerning the early convening of the House of Delegates, and a recent amendment to the City's Building Code which will permit the Society to proceed with the construction of its new building.

Kauai

The March 1 meeting was held at the Kauai Veterans Hospital. It was decided to write the HMA and ask for rescheduling of the Family Planning Conference to a time more acceptable to the Society. Communications relative to the Prevailing Fees Program were read. Dr. Wade reported that the HMSA Board of Directors voted to provide the subscribers 25% more toward the payment of medical bills; surgical fees would be worked out later based on a 4.5 conversion factor, which would give a 15.7% increase over the present contract. To provide statewide coverage for Hawaiian Telephone, Federal Employees, etc., HMSA has recommended that KCMS terminate its contract on February 18, 1966, waiving the 120-day waiting period, and that those physicians who have individual contracts with HMSA be permitted to cancel their contracts with HMSA on the same date. If they fail to terminate their contracts at that time, they will not be permitted to terminate the contracts until June, 1966. An alternative HMSA recommendation was that the KCMS now approve the new fee schedule. The waiting period would not be waived. Dr. Wade explained that by the Society's accepting the first recommendation, the subscribers on Kauai would receive the same benefits as the other subscribers over the State. It was moved and seconded to agree to the first recommendation as stated. The motion failed to carry. It was moved and seconded that the KCMS agree to the first recommendation, terminating the contract as of February 19, 1966, and that the termination be effective then, and the 120-day waiting period be waived. The motion failed to carry.

The question arose on what effect the master contract cancellation would have on the individual doctors. The Secretary commented that it was understood that whatever the county action was, it would in no way affect the individual doctors' actions. Dr. Wade said the subscriber on Kauai would be paid according to the old rate, without any increase in benefits during the 120-day waiting period. Dr. Wallis noted that if Kauai was the only county acting independently this would result in not receiving any of the new benefits. Dr. Wade explained that if the county were to ride out the 120-day waiting period,

continued page 428

HAWAII MEDICAL JOURNAL

Hawaii Medical Association

MINUTES OF THE COUNCIL MEETING

March 24, 1966 at 8:30 P.M.
Coco Palms Hotel

PRESENT

O. D. Pinkerton, presiding; Drs. Allison, Andrews, Chinn, Fong, Helms (for Dr. Miyamoto), Lowrey (for Dr. Batten), Tomita, and Wallis, plus Drs. Miyashiro, Iaconetti, and Messrs. T. Thorson and Jerry Gould, Field Representative of the AMA.

MINUTES

The minutes of the October 27, 1966, meeting were approved as printed in the January-February issue of the JOURNAL.

COMMUNICATIONS REQUIRING ACTION

Letter from Dr. Robert P. C. Ho: A request for waiver of Registration Fees for all military physicians for 1966 HMA Scientific Program was received.

ACTION:

It was voted to approve waiver of registration fees for all military personnel at the HMA Annual Meeting for the year 1966.

It was voted to approve waiver of registration fees for interns, residents, guest speakers, and the Editor of the JOURNAL at the HMA Annual Meeting for the year 1966.

Letter from Maternal & Perinatal Mortality Study Committee: A request for support to route City and County of Honolulu ambulances was received.

ACTION:

It was voted to refer this matter to the Honolulu County Medical Society for action.

Letter from Radiological Society: Support for separation of professional fees from hospital charges was requested. It was pointed out that radiologists and pathologists in small hospitals would have a difficult time because the hospitals subsidize their expenses and they are paid a salary. However, it was felt that these physicians could bill separately and still receive a retainer from the hospital.

ACTION:

It was voted to approve the principle and support the radiological and pathological societies whereby they will bill directly for their services through a mutual working agreement with the hospital.

REPORT OF THE SECRETARY

The Secretary's three recommendations were discussed and acted upon as follows:

ACTION:

It was voted to accept the following two recommendations of the Secretary: (1) that all county roster changes and requests for dues waiver be approved; and (2) that the two members reported by Maui in December for whom dues have not been received, be accepted as of January 1, 1966.

The third recommendation of the Secretary was that the Council name the place and date for the 1967 Annual Meeting.

ACTION:

It was voted to hold the 1967 Annual Meeting on May 4-7.

It was voted that the 1967 Annual Meeting be held in Honolulu and that the exact place be determined at a later date.

REPORT OF THE TREASURER

The Treasurer's report was noted and discussed.

ACTION:

It was voted to accept the Treasurer's four recommedations which are as follows: (1) That there be no increase in the dues for 1967; (2) that the budget as circulated be presented to the House of Delegates for approval; (3) that the excess of income over expense accumulated from the Health Fair be allocated to the PR Committee to launch its new TV program; and (4) that the firm of Leong & Leong continue to be retained as auditors for the Association.

REPORT OF SPECIAL AND STANDING COMMITTEES

Dr. Andrews reported on the Nurses Liaison and Tuberculosis Committees. He noted that he received a report of the Tuberculosis Committee after he had submitted his report.

ACTION:

It was voted to accept Dr. Andrews' report.

Dr. Miyamoto's reports on the Communicable Disease & Immunization and VD, Hawaii Academy of Science, and School Health Committees were read and discussed.

Communicable Disease & Immunization-VD Committee: This Committee feels that the VD Committee should be a separate one. The Council felt that if the Committee felt that the VD Committee should go back to being a separate committee, they can make the recommendation without a Council ruling. It was suggested that this be presented to the House of Delegates. Dr. Berry of the Department of Health asked this Committee for approval for a free measles vaccine clinic for children in the Nanakuli-Waianae area.

ACTION:

It was voted to have the matter of Oahu clinics referred to the Honolulu County Medical Society.

School Health Committee: This Committee met several times and the following actions were taken: (1) Recommended that all physical examinations be done on an annual basis and that these be deemed sufficient for all competitive sports; and (2) Recommend strongly that school system be provided with nurses and/or health coordinators.

ACTION:

It was voted to refer this matter to the House of Delegates and to have that body make recommendations.

Reports covering the Cancer, Federal Medical Services, Hospital, Indigent Medical Care, Medical Care Plans & Fees, and Medical Education Committees were presented by the President.

continued page 420

HAWAII MEDICAL JOURNAL

Book Reviews

Current Surgical Management III

Editors Edwin H. Ellison, M.D., Stanley R. Friesen, M.D., John H. Mulholland, M.D., with contributions by 104 authorities, 519 pp., $11.50, W. B. Saunders Company, 1965.

THE VALUE of this volume lies in the opportunity it presents to the reader to compare diametrically opposed viewpoints on controversial and provocative problems in the field of general surgery. Such diametrically opposed articles as "Leave The Common Duct Alone" by Heneage Ogilvie and "The 'Compleat' Cholecystectomy" by C. Frederick Kittle are characteristic of the type of disagreement that exists between our prominent authorities on their management of identical conditions. It is a book that should give its readers a much needed view of the long established but little recognized fact that there are many ways to skin a cat in the surgical fields, in spite of the fact that it is the common practice of educators in these fields to teach their students that theirs is the only way. If the reader gains insight into this view, he will have benefitted more than he will from the "factual" content of the volume. It is in fact a presentation of opinions rather than facts and is extremely valuable if this is kept in mind.

JAMES CHERRY, M.D.

Bone Tumors, 3rd Ed.

By Louis Lichtenstein, M.D., 411 pp., $16.75, The C. V. Mosby Company, 1965.

THERE ARE SEVERAL excellent books including Jaffe, Lichtenstein, and Dahlin, which cover the essentials of bone tumor. A fascicle by Ackerman also has merit. Kirkpatrick and Aegeter's text also is satisfactory. It is difficult to choose among these books: each has a different purpose. The photomicrographs reproduced by Ackerman certainly give the best background for the pathologist. Jaffe is more thorough, including extensive chapter-by-chapter comments on differential diagnosis. His book is a must for the expert. Dahlin has more statistics but also a worthwhile text.

It is in comparison with these books that Lichtenstein's newest edition must be considered. The basic format and directness is unchanged from his previous two edition. Unlike most new editions, this is updated but not enlarged. He has clarified some concepts, particularly on osteogenic fibromas and malignant chondroid tumors. It would have been more helpful, I believe, to cut his chapter on multiple myeloma even more than he did and in its place greatly enlarge the chapter on non-neoplastic lesions which may be mistaken for tumors. In spite of these failings I believe that outside of Jaffe, this is the best book in the field. For that matter, Lichtenstein accomplishes almost what Jaffe does, with much more economy of words.

While it might seem reasonable to include the helpful sections on differential diagnosis, as Jaffe routinely does, the fact remains that bone pathology is not that easy. To be at all knowledgeable the physician must be familiar with the entire field, not just one chapter in a book. Lichtenstein's book precludes the temptation of over-simplification on the part of the reader. He makes it all too clear that the problem of bone tumors is not one to be passed over lightly and that the interested physician must be well versed in all tumors and tumor-like conditions to care for any one given tumor. In addition, he stresses that a knowledgeable clinician, radiologist and pathologist *must* combine talents in this field. The reader who develops insight along these lines will contribute far more toward good patient care than the reader who absorbs only the sterile facts and one of the basic philosophy of bone tumors.

L. H. GORDON, M.D.

Progress in Neurology and Psychiatry, Vol. XX

Edited by E. A. Spiegel, M.D., 783 pp., $17.50, Grune & Stratton, 1965.

THIS ANNUAL review of neurology, neurosurgery, and psychiatry covers over 6,000 papers and consists of 783 pages. It is a must for one interested in reviewing the literature of the neuropsychiatric specialties.

MICHAEL M. OKIHIRO, M.D.

Biophysical Mechanisms in Vascular Homeostasis and Intravascular Thrombosis

Edited by Philip N. Sawyer, M.D., Introduction by Harold A. Abramson, 379 pp., $8.95, Appleton-Century-Crofts, 1965.

A COMPILATION of papers is presented with ensuing panel discussions on the dynamic interactions of the vascular system and blood flow, homeostasis and thrombosis, at a two-day conference at the Downstate Medical Center, State University of New York, Brooklyn, New York, in 1963. Apparently, there is large body of information and data regarding the relationship between interfacial phenomenon, thrombosis, and hemostasis as collected by a small group of investigators highly interested in these areas. The data are at times highly technical. The panel discussions are especially stimulating and bring together the various aspects of very complicated basic problems by the various participants. The participants are experts in their highly specialized fields. For those interested in the biophysical aspects of vascular homeostasis and intravascular thrombosis, this book is highly recommended.

ROBERT T. S. JIM, M.D.

★Injuries of Nerves: And Their Consequences

By S. Weir Mitchell, M.D., 377 pp., $2.75, Dover Publications, Inc., 1965.

ORIGINALLY WRITTEN in 1872, this book is reprinted by the American Academy of Neurology as the second of its recently instituted reprint series. This classic was written by a remarkable man, the first President of the American Neurological Association and later a widely read novelist. He accumulated a large experience in peripheral nerve injuries as a result of treating soldiers who were injured during the Civil War. With two other colleagues, Drs. George R. Morehouse and William W. K. Kenn, he gathered only neurological patients in a 400-

★ means highly recommended.

bed hospital, and this book is the result of their experiences in treating peripheral nerve injuries.

Although he is known for many things, several outstanding contributions include his work with causalgia, which is still widely quoted by modern authors, and some of his methods of physical therapy, which we still use today.

Dr. Mitchell utilizes many case histories to illustrate his presentation and these make for most interesting and delightful reading for the neurologist, neurosurgeon, and physiatrist.

MICHAEL M. OKIHIRO, M.D.

★Diagnosis and Therapy of the Glaucomas, 2d Ed.

By Bernard Becker, M.D., and Robert N. Shaffer, M.D., F.A.C.S., 443 pp., $18.50, The C. V. Mosby Company, 1965.

THIS IS A REVISION and updating of the first edition of this text published in 1961. It was a most welcome volume at that time, since it was the first book in many years to present a brief but comprehensive picture of a complicated subject. The same format has been followed in the second edition, most of the text and illustrations being the same. Additions include newer types of applanation tonometers, effects of alpha-chymotrypsin and corticosteroids on aqueous outflow and the trabecular network, the genetic aspects of glaucoma, the relation of PTC taste testing and glaucoma, and the management of glaucoma and cataract. Twenty full-page drawings from goniophotographs well marked to illustrate the fine points of gonioscopic diagnosis have been included. The second edition contains 82 pages more than the first.

I think that at least one edition of this text should be in every ophthalmologist's library. It is the standard work on the subject, and by careful revision, the authors have maintained it as such.

GERALD D. FAULKNER, M.D.

Surgery of the Parotid Gland

By Robin Anderson, M.D., F.A.C.S., and Louis T. Byars, M.D., F.A.C.S., 177 pp., $12.75, C. V. Mosby Company, 1965.

THESE TWO PLASTIC surgeons have very definite ideas about the handling of diseases of the parotid glands, and one cannot help sensing their frustration when they review or repair the iatrogenic complications caused by "occasional surgeons" of the parotid gland.

Their detailed treatment of the subject matter covers 177 pages, including the index. The diagrams, gross and microscopic examples, and x-rays are well chosen and placed.

The discussion is outlined in a classical manner including historical events, complications, and secondary reconstructions. Because of their specialty, a good account of nerve repair and grafts and reconstructive surgery is rendered.

A review of the technical aspects of the removal of the parotid gland or a radical neck dissection can be more conveniently obtained from other atlases of the head and neck. However, I do not believe it was the authors' intention to emphasize technique.

BENJAMIN TOM, M.D.

Accident Surgery, Vol. 3

Edited by F. Fred Moseley, 362 pp., $12.00, Appleton-Century-Crofts, 1965.

THIS TEXT COMPRISES a series of lectures presented during the third postgraduate course on Emergency and Accidental Trauma at the Royal Victoria Hospital.

It is no different from other symposia of trauma which have become voluminous in medical libraries. I doubt that it has made any new contributions in traumatology except for personal views on management, which may or may not broaden our philosophy in this "Age of Trauma."

EDMUND C. K. LUM, M.D.

Neuro-Ophthalmology, Vol. II

Symposium of the University of Miami and the Bascom Palmer Eye Institute. Compiled and edited by J. Lawton Smith, M.D., 278 pp., $21.75, The C. V. Mosby Company, 1965.

THIS SYMPOSIUM just published is quite fragmentary, in that it incompletely covers the subject, as indicated by the title. The various authors fail in my opinion to substantiate more than a few cases to verify their opinions. To me the most important objective the symposium reaches is the treatise on seronegative syphilis, particularly in view of the rapid increase of syphilis today.

I would not recommend this text as part of an ophthalmologist's library, but a good reference text for some of the important conditions it covers. I feel that too many conclusions reached in this text are based upon animal experimentation. While it may appear to be a little inconsistent as a reviewer of texts, the price of this small volume is in sad proportion to its contents. The illustrations are good, the photography of pupillary reactions seems poor, but the "binding is excellent" to use a well worn out phrase of Oliver Wendell Holmes.

PHILIP M. CORBOY, M.D.

★Surgery in America from the Colonial Era to the Twentieth Century

Edited by A. Scott Earle, M.D., 280 pp., $8.50, W. B. Saunders Company, 1965.

FROM THE EARLY WRITINGS (or was it advertising?) of Zabbiel Boylston on Surgical Operations in the Colonies, through those of Ephraim McDowell, William Beaumont, James Marion Sims, Rudolph Matas, and John B. Murphy, to William Halsted's discussion on "The Training of the Surgeon," read as the annual address at Yale University in 1904, this fascinating account of the development of the practice of surgery in America is an absolute must for the young, modern surgeon, as well as the older practitioner. Even those of us who trained 30 or more years ago, as we face the bewildering vista of the surgical advances sure to come in the next 30, 20, or even 10 years, can gain something from this book of 268 pages as we ponder the courage and vision of these pioneers in the field of surgery.

FRANK H. HATLELID, M.D.

★Diseases of the Newborn, 2d Ed.

By Alexander J. Schaffer, M.D., with a section on neonatal cardiology by Milton Markowitz, M.D., and a section on fluid and electrolyte therapy by Lawrence Finberg, M.D., 1,023 pp., $22.00, W. B. Saunders Company, 1965.

THE NEW EDITION of Dr. Schaffer's encyclopedic monograph on neonatal medicine has the merit of completeness and the associated fault of excessive detail. It is authoritative, clinically oriented, and quite up to date. For these reasons all practitioners, and especially house officers, dealing with newborn babies should be familiar with this volume.

The author writes, as stated in the preface, as "one practitioner to another," with heavy emphasis on detailed, illustrative case histories. Specific recommenda-

continued page 428

Notes and News

Professional Moves

The suburbanite is here to stay. Recent professional notices seem to be confined to our outlying areas, especially Waipahu. Allergist **Keiichi Goshi** associated with **Ted Tomita** at the Waipahu Professional Center and OB-GYN man **Nathan Shklov** associated with the Phil-Am Medical Associates, also in Waipahu.

The mental health of this State seems to be on the mend. First came **Bonifacio Dy,** who joined the State Hospital staff in early March. Then came **Bienvenido Garcia,** who was at the State Hospital from 1962 to 1963 and who is back as Chief of the Convalescent Center. **Robert Collis** from the Mayo Clinic will head the Rural Oahu Unit and **J. M. Robinson** from Alameda County, Calif., will be a staff psychiatrist. The administrator's position, however, is still vacant and there are no takers yet even with Hawaiian sunshine thrown in.

Audrey A. Bill, former consultant in child health with the Massachusetts Dept. of Public Health, has been appointed Maternal and Child Health Services physician of the Child Health Branch, Children's Health Services Division. We have said a mouthful.

We notice that **Robert G. B. Bjornson,** the new radiologist for Maui Memorial Hospital, has finally arrived. He succeeds **Linneus Idstrom,** who left the position after two months for personal reasons. **Ghim Yeoh,** who has been covering Maui once a week, in the interim can now rest.

PAUL WITHINGTON, M.D.
1888-1966

I was a youngster in a Wisconsin grade school when I first heard of Paul Withington. It was 1914 and the young doctor, who had been an All American football player and Henley oarsman at Harvard, was coming to coach football at the University of Wisconsin. His career was followed by me through the years until I came to Honolulu. Then, in 1925, I met him on my first day at The Queen's Hospital. He was tall, tanned, sinewy, strong, and handsome—the very picture of a great American athlete. I heard of his many prowesses. He could throw the hardest baseball, swim fastest and farthest, and he could defeat them all at tennis, even on the third day after an appendectomy. He stroked the Myrtle Boat Club for years and when 45 years of age, forced the Hilo Club to set a record in Honolulu Harbor. He was a great squash player and had the only court in these islands. For years his sail boat, the Blue Jacket, won many races and he was the skipper. He played and coached football until age 50. He truly knew more about the history of the game than anyone else I have known. He was wont to go into a long discourse on the origins of the T, the mousetrap, the forward pass, defensive line play. The only game he did not master was golf, and the once a year he played in the Medical Association tournament, he would wager he could break 100, but never did. He was a great amateur wrestler and often "worked out" with the professionals.

In 1929 he, with Dr. S. D. Porteus, made a seven-month study of the aborigines of Australia. This nearly cost Dr. Paul his life. He developed an osteomyelitis in his right forefinger which finally responded after weeks of disablement.

In medicine he did general practice and his bent was toward things orthopedic and he handled many athletic injuries. He was conservative in his approach to most medical and surgical problems. He gave much time to all patients. His office nurse had a difficult time regulating his schedule because he was often late. I can remember when he carried three watches—the pocket watch with a gold Harvard football, a wrist watch, and another in his belt buckle—and still he was late because he had made a house call or hospital visit and had stayed too long. He answered to a house call with enthusiasm. No doctor ever had more loyal patients. They would wait longer for him than for anyone I have ever known. When seeing a patient, he would give his undivided attention, and others waited their turn, for he would not be hurried.

He served the profession in many useful ways and gave unstintingly of his time at Queen's, Kapiolani, and St. Francis Hospitals. Much of the planning for hospital expansion in the 1940's was under his chairmanship. He served as President of the Hawaii Territorial Medical Society in 1940. He was a member of the Pacific Club, Pearl Harbor Yacht Club, the Harvard Clubs of New York and Honolulu. He is in Who's Who in America. He served the Territorial Boxing Commission for many years as Chairman. He was a great fighter for many causes and was often asked when he was going to begin working for himself instead of school and state. By his sportsmen friends he was known as Doc Withington and by his patients as Dr. Paul.

Dr. Withington was born in Escondido, California, January 25, 1888. He came to Honolulu with his family in 1900 and later attended and graduated from Punahou in 1904, from Harvard College in 1908, and then Harvard Medical School in 1912. He interned at Boston City Hospital. He was a roommate of Dr. Sam Levine whom he often quoted and who died on nearly the same day.

He was justifiably proud of his military record. He was a Major in the Medical Corps, American Expeditionary Forces, in World War I, serving first with the British. In World War II he was a Captain in the Navy Medical Corps.

Dr. Paul Withington died on April 4, 1966, of congestive heart failure.

Survivors are two sons, Restarick and David; a daughter, Elizabeth, his wife, Rose, and several grandchildren; two brothers, Lothrop of Boston and Dennett of San Bernardino, California.

DOUGLAS B. BELL, I, M.D.

Edwin T. Nishimura, Sacramento-born pathologist who is currently teaching at the University of California at Los Angeles, was appointed Professor and Chairman of Pathology at the new U.H. Medical School. This completes the roster for department heads for the two-year school. Since the new medical school building is still on the drawing board, he will set up his laboratory in space rented from Kapiolani Hospital where he will continue his research.

Sportsmen

Golfers: **Doug Bell II** is our Golfer of the Year, having scored a hole-in-one with a 6-iron at the 110-yard 3rd hole at Hawaii Kai. Fortunately, the clubhouse was relatively deserted and the round of drinks did not cost too much, but perhaps we should consult our insurance agents for a hole-in-one insurance policy. Like death itself, you never know when. . . . Speaking of hole-in-ones, it seems that **Francis Wong,** the Big Island's Sportsman of the Year, is a unique hole-in-oner. One memorable day in March five years ago, he drove a ball off the 18th green at the Municipal Course kerplunk into the left side pocket of a fellow golfer coming down the 10th. Memories must have dimmed, for this month, he turned in a fearless net 66 to win B flight in the Hawaii Island Golf Assn. Scholarship Fund Tournament at the same course.

The Waialae Country Club has its share of ringers. In February, **Al Hartwell** and partner took B flight. In March, **Tom Min** and partner won team medal and **Ted Tomita** shot seven up on par to take match versus par. **Richard Chun** won C flight while **Francis Kaneshiro** and partner won team medal. Later in March, **Toots Fujii** and **Roy Tanoue** won team medal while **Richard Chun** was 5 up in C flight. Next week, Richard was again C flight winner while **Tom Min** won both B flight and team best ball. Tom continued his winning streak into April by winning his flight. Then along came **Mac Mitsuda** to start his streak by winning the annual Club Day tournament with 43 points in stableford and teamed to win team stableford.

L. L. SEXTON
1879-1966

The death of Dr. Leo Lloyd Sexton on April 23, 1966, brought to a close the life of an outstanding physician who was devoted to the welfare of the inhabitants of Hawaii for a span of over 40 years.

Born in Indianola, Iowa, December 22, 1879, he migrated westward with his family by covered wagon, ultimately coming to reside in Tacoma, Washington, where he obtained his initial education. An account of his early career reveals that though he was not raised in affluence, he decided to become a physician. To this end and in order to acquire sufficient funds, he delivered newspapers, worked as a janitor during the school terms, and his summer vacations were spent as a harvest hand in the wheat fields, as a lumberjack, and as a Seattle streetcar conductor.

Graduating with an M.D. degree from the University of California in June, 1907, Dr. Sexton early demonstrated his interest in and aptitude for surgery by receiving the highest grade in his class in this subject.

After completing an internship at Southern Pacific Hospital in Sacramento, California, he came to The Queen's Hospital in Honolulu, being the second physician to serve on the house staff of this institution and the 25th to successfully pass the examination of the Territorial Board of Medical Examiners. After spending a year at The Queen's Hospital, he was employed as a plantation physician on the Hamakua Coast of Hawaii. As he related in later years, it was here that he first learned the art of speaking and drinking scotch.

Having decided that his future career would best be served by returning to San Francisco, he was on his way to the boat when he was persuaded under rather fortuitous circumstances to substitute for Dr. Frank Putman at Lihue Plantation on Kauai while the latter got married.

This decision proved to be one of the most important ones in Dr. Sexton's career. First, it permitted him to meet and subsequently marry Miss Emily Rice, a descendant of the well-known and respected missionary family and, second, it was responsible for Dr. Sexton's remaining in Hawaii, for which his many patients over the ensuing years were most grateful. For a brief time after completing his Kauai assignment, Dr. Sexton practiced in Honolulu, but on November 2, 1910, he and his bride established residence in Hilo where he remained until his retirement in 1949.

If space permitted, many things could be said about the impact Dr. and Mrs. Sexton had on the lives of the citizens of Hilo and the Island of Hawaii, all of which would be to their credit. Being a well-trained physician in the period in which he lived and having surgical experience and dexterity, he was able to bring comfort and happiness to his many devoted patients. He was active in the Board of Health. He served as physician in charge of Puumaile Home for tuberculosis for over 20 years. He was a member of the Public Health Service and he was a Major in the National Guard of Hawaii. In 1950, he was made an honorary member of the American Association of Industrial Physicians and Surgeons. He was a Mason and for his devotion to this worthy organization, the 33rd Degree was conferred upon him.

The greatest contribution, I am sure, that Dr. and Mrs. Sexton ever made to Hawaii was in the rearing of two outstanding sons. The older, Lloyd, is recognized not only locally and nationally, but internationally, as a most talented artist. Portraits, landscapes, and flowers are depicted by him with exactness, grace, charm, and beauty and are the source of much happiness to the residents of Hawaii and beyond. Harold, who followed in his father's footsteps, is a pediatrician with attainments equal to that of his gifted brother.

So, looking back over the life of Leo Sexton, one can truthfully say Hawaii was fortunate when he decided to cast his lot with the inhabitants of this beautiful archipelago. One cannot help but admire an individual who attains success by the sweat of his brow, who devotes his life to the welfare of others, who has reared a family to carry on with the noble traditions of their ancestors, who was a devoted husband to a lovable and faithful wife, and about whom when his life is ended, one can say without fear of contradiction that he was a credit to the community in which he lived. Such was the career of Leo Lloyd Sexton. Who can aspire to nobler accomplishments?

JOSEPH E. STRODE, M.D.

The lone item from Oahu Country Club was that of **R. V. Sloan.** He won the individual stableford in late March. With the HMA golf tournament coming up, the OCC golfers seem to have gone underground.

At the Ala Wai, **Bob "Slugger" Oishi** won the March-April trophy for A flight, while **Yasuyuki Fukushima** (who has had lean years after taking pro lessons) finally arrived and copped 2d place. **Kyuro "Chi Chi" Okazaki** paced the B flighters while **Paul "Tiger" Tamura** was a full 8 strokes behind for 2d place. **Joe Nishimoto** celebrated April 28 as the day he finally broke that proverbial 80 with a sparkling 79.

The Big Island golfers are to be reckoned with. **T. L. Chang** won the March ace at the Hilo Chinese Golf Club's tournament at the municipal links while **Richard Hata** won the Lincoln Wreckers Club tournament in April.

Sailors: **Fred Shepard** was again winner in the Cal 20 class while **Els Harris** was 2d in the PC's. **Jack Watson** won Class A Division race at the La Mariana Club.

Card Sharks: **Ken Ho** and partner were first East-West in the Honolulu Unit tournament in March while **Ray deHay** and partner were second in the North-South in Section C of the March Charity Tournament for Retarded Children. On Maui, **B. Weeks** and partner were first in the duplicate game at Wailuku.

Fishermen: **Ivar Larsen** landed the biggest fish, an 86-pound Marlin in the Dave Nottage annual invitational in February, but **Jim Cherry** and cohorts won by garnering honors for the largest fish in three other categories, viz. mahimahi, aku, and kawakawa. **Jim Marnie's** 27-pound mahimahi placed 2d in the Freddie Mac Memorial Fishing Tourney in March. In spite of pre-tournament build up, **William Goodhue** and **Burt Wade** of Kauai did not score. (Bill had corralled the prizes last year.)

Hunters: Incorrigible astigmatic hunter **James Nishi** fired 34 shots from his trusty Winchester to bag two average-sized billy goats on Lanai in March.

Other sporty items: **Herbert Wong** leads the discussion portion of the swim and trim classes for women at the Richards St. YWCA. Stop! They are not taking any more volunteers. **Richard You** received the Scotty Schuman Award for outstanding contributions to athletics at the Annual Quarterback Club banquet. **S. C. Culpepper's** seven-year-old English pointer was runner-up at the Hawaiian Open Pheasant Championship. **Bob Johnston's** pointer, Ranger's Luck, had no luck.

Elected, Appointed and Honored

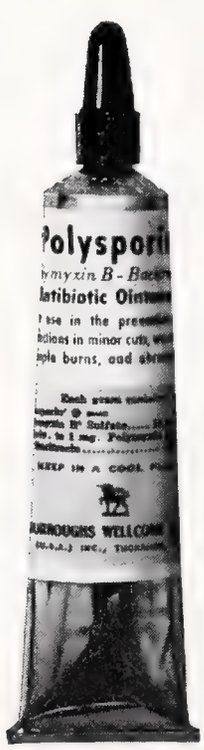
Our ever-friendly insurance company, the HMSA, reported 1965 a banner year and elected **Homer Benson, William Moore, Jr.,** and **Samuel Wallis** to new three-year terms. **Douglas Bell, Sr.,** and **Les Vasconcellos** were named to fill board vacancies. We pray it will be a banner year for physicians as well.

On our political front, **William Cody, George Goto, K. Y. Lum,** and **George Stevenson** were appointed members of the new Mental Health Coordinating Committee for the State and **Toru Nishigaya** was reelected to the Health Facilities Planning Council. **Milton Howell** of Hana was appointed to the Maui Committee on Aging. **Kenneth Fujii** was appointed to the Board of Medical Examiners and **Clarence Chang** was nominated a member-at-large of the University's Board of Regents.

On our exclusive side, **Richard Kelley** was elected the new President of the Stanford Club of Hawaii and **William John Holmes** was elected to the Board of Governors of the Pacific Club. **George Mills** was unanimously reelected to a third term as President of the Association of Hawaiian Civic Clubs at their eighth annual convention. Each of the 24 member clubs paid him special tribute. **Raymond Corsini** and **William Cody** were elected to the John Howard Assn.'s Board of Directors. *Who's Who in America* apparently doesn't know who's

continued page 424

in treating topical infections, no need to sensitize the patient



USE 'POLYSPORIN'® brand
POLYMYXIN B-BACITRACIN
ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
Supplied: In ½ oz. and 1 oz. tubes
Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Let the Versatol system point the way to greater accuracy and precision in clinical chemistry.... Your course is charted by the limits of confidence on the Versatol full-range charts. Your daily guides are the Versatol standards (abnormal as well as normal), which help you steer past potential sources of error.

The Versatol concept is twofold: (1) human serum should be matched against human serum, not an aqueous solution; (2) a standard must have known, weighed-in amounts, not merely an average of assay results. Only Versatols fulfill these requirements.

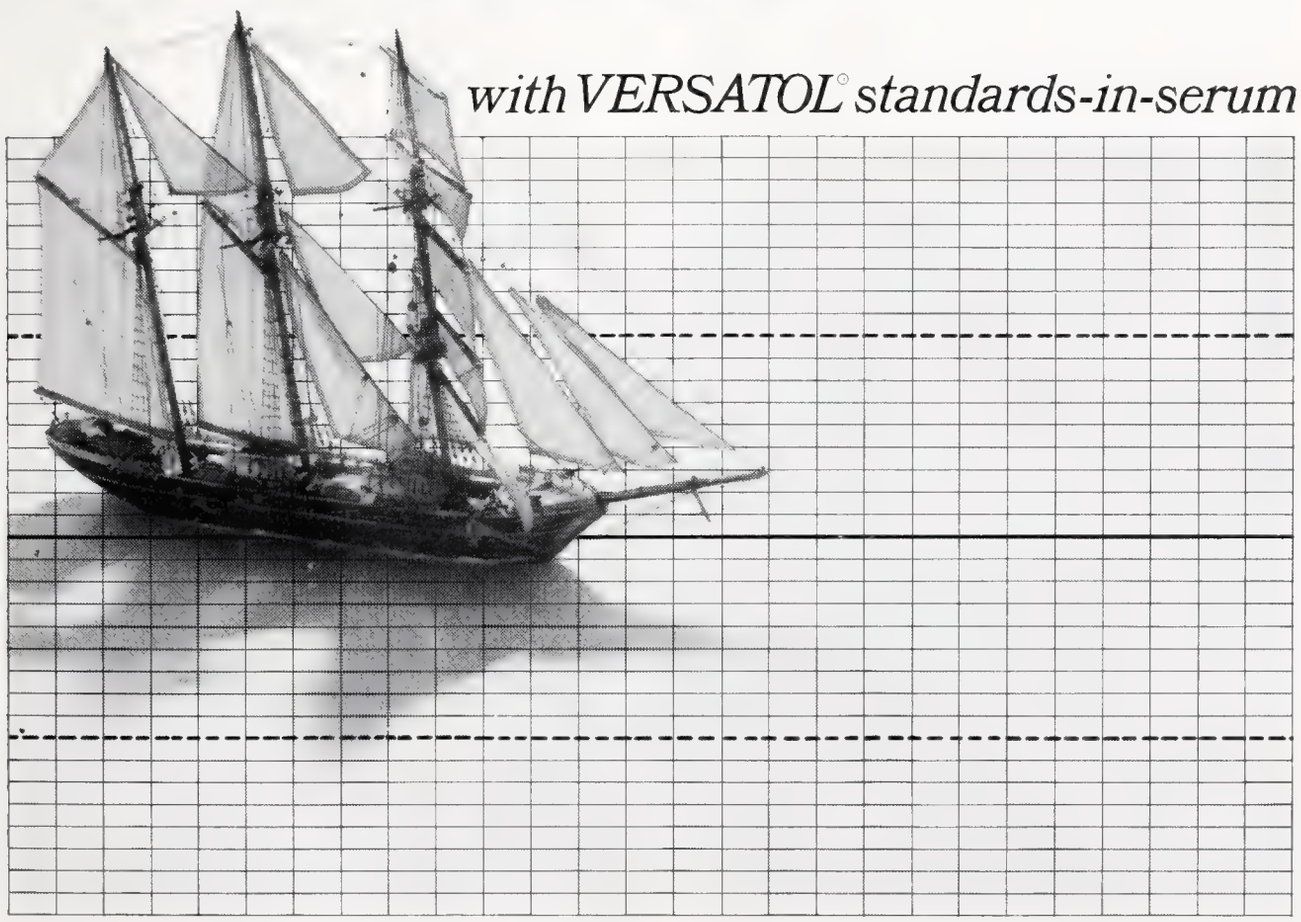
Versatol Full-Range Quality Control Set / Versatol / Versatol-A and Versatol-A Alternate / Versatol Pediatric / Serachol® / Versatol-E-N / Versatol-E / Versatol Full-Range Quality Control Workbook / Workshop in Quality Control

GENERAL DIAGNOSTICS DIVISION

WARNER-CHILCOTT LABORATORIES DIV., MORRIS PLAINS, N.J.

'On Course'

with VERSATOL® standards-in-serum



GDJ-636

HAWAII TECHNOLOGISTS' BULLETIN

Official Publication of the Hawaii Society of Medical Technologists

Editor: STELLA YOSHIDA, U. S. Army Tripler Hospital

Problems in Continuing Education Illustrated by a Field Training Institute Held in Samoa

Imagine a laboratory about 20 by 30 feet with workbenches around the periphery, a large island bench in the middle. In one section of the room the "routines"—stools, urinalysis, and CBC's—are being worked on. Chemistries and cross-matches are being done on the island bench. A small, screened lanai with a long workbench on the window side provides the bacteriology section and teaching lab. Now, add eleven Pacific Island institute participants (trained medical technologists taking a refresher course) plus three apprentices working in the lab, plus two instructors. That's not so bad! But, add one high bed-table for bleeding donors, and one big emergency—and you have ten Samoan would-be donors; their husbands or wives; and their children who get bolder as the hours wear on and start playing tag around the lab. Then you have chaos! Fortunately, there was only one such emergency, where all class work had to stop. While the host technicians typed, cross-matched, and bled donors, the visiting participants took over the routine work—dishwashing, charting, or whatever had to be done—in the efficient way of men who know their job.

The above episode was just one of the problems in teaching a refresher course to technicians of the Pacific Area. There were others.

The training group was brought together in Pago Pago in the summer of 1964 by the East-West Center's Institute for Technical Interchange. The project officer, Mr. Richard Suehiro, was responsible for the organization of the institute. The visiting staff was made up of Dr. Albert Benedict, Department of Microbiology, University of Hawaii; Mrs. Betty Hughes, medical technologist at Hawaii State Hospital; Del Adlawan, medical technologist, then at St. Francis Hospital; and the author of this article, who is in charge of the medical technology program at the University.

The students were Medical Technologists from throughout the Pacific Area: two from the Trust Territories, three from British Samoa, four from the Hospital of American Samoa at Pago Pago, and two Public Health Sanitarians from American Samoa. Their educational background varied a great deal. Of the whole group, only four were high school graduates. These were the younger men from American Samoa. The three from Western Samoa had finished Form II, equivalent to the 8th grade in American schools. Four of the American technicians had spent three years training at Suva Medical School in Fiji. One of the two technicians from the Trust Territories had trained for two years at the Guam Medical School, the other spent a year's apprenticeship in Hilo Memorial Hospital. The three men from Western Samoa had all received on-the-job training at Apia Hospital. This training was of better quality than might be supposed, since Peter Rassmussen, the Chief Technologist there, is an excellent teacher and keeps abreast of the times through journals and new texts. Discounting the two sanitarians, the technical training of all was very good. The great lack was in basic knowledge of principles of chemistry and bacteriology. Sile Koria, head technician in Pago, expressed the feelings of most of the men when he wrote on the E-W Center questionnaire, ". . . most of the laboratory tests we know how to run, but we don't know why and how things change, occur, or react."

Besides the differences in education, there were great differences in age. Four participants were over forty and only two were under twenty-five. Experience ranged from 29 years of lab work to none at all!

From a questionnaire sent out by Mr. Suehiro, it was determined what was most wanted by way of review and the course was then organized along those lines. Interest was expressed in bacteriology and in chemistry, and so those subjects were emphasized.

Some problems in teaching we had anticipated, but some we had not. English difficulties were more amusing than serious. Thus Del Adlawan's explanation of polychromatophilia came back on a test as "Polychromatophilia is a different of so many lovely colors such as pink and blue." Dr. Benedict was informed that "Toxoid means you still have some toxic inside your body after injection, but won't do any harm or increase." The answer with the most appeal, though, was Pene's

when he decided not to bluff, and simply wrote, "Please, I don't know."

While techniques and technical knowledge in chemistry were unexpectedly good, the Samoans' disregard for basically good practice in hematology was shocking. Del drilled and drilled them in fundamentals that he should have been able to take for granted. At the same time, he was able to demonstrate how to teach the apprentice technicians (not officially part of the institute) who had no training and who had been left to flounder after being instructed in a new technique only once or twice. This demonstration was as valuable as any of our planned lessons, for they hadn't realized how to go about teaching their trainees.

One of our unexpected problems was announced to us in an offhand way. We were having lunch at the Rainmaker Hotel (the old one) where government workers, from contract laborers to administrators, boarded. One of the engineers who was installing the educational TV system passed our table and he said casually, "Oh, the electricity will be off from 8 to 4 for the next three days!" We dashed back to the hospital to see if Dr. Kaufman, the hospital director, had heard the news. He hadn't, so he called the Governor's office to check, and sure enough—it was so. The officials just hadn't gotten around to calling the hospital!

There was a generator in surgery. Stored blood and perishable sera, etc., were moved from the lab to a refrigerator there. But as for the rest of the laboratory work and our classes—oh, well, everybody go fishing until 4 o'clock! By holding night sessions, we almost kept up to schedule.

An East-West Center objective of their institutes is to provide cultural interchange as well as technical exchange. It was here that the staff gained unforgettably more than they gave. Our Samoan friends entertained us with picnics and parties that were a delight to the eye and the taste. One thing about Samoan parties that pleased us mightily was that everyone, but everyone, is expected to dance. And dancing means the old-fashioned kind—the fox-trot, the waltz, and the two-step. But it also meant the Twist, the Watusi, the Frug, and the *siva-siva!* At the final bang-up, all-out, luau-style *fia-fia* to celebrate the completion of the course, the grandmothers and grandfathers, the mothers and fathers, the young marrieds, the teens, and the little ones all joined in the fun. Ask Betty to do the Samoan *siva-siva* for you some day. She was taught by an expert!

One of the "cultural interchange" ideas that backfired was the problem of sleeping. All the students were billetted in Sile Koria's large home. They all slept in one large room, about 15 x 20, on lauhala mats! Now, this was fine for the Samoans, but Augustin, an older student from Saipan, was very unhappy. Sleeping on the floor gave him a backache. "I'm lucky at that," he said. "If Sile's *fale* was Samoan style, with rocks for a floor, I probably couldn't walk at all."

Naturally, problems like the above are peculiar to Samoa, but others were aspects of problems inherent in all continuing education. And the chief problem in continuing education is finding the time to continue. The larger laboratories find it relatively easy to release one or two of the staff for meetings and classes. Small labs, where the absence of one staff member cuts the work force by 25% or more, find it almost impossible. Courses given after hours provide one solution. While such courses are not so hard on the single, free-as-a-bird person, they are sometimes too demanding for the family man or woman.

One of the best solutions to the time problem is the one- or two-day workshop. This, of course, limits very sharply the span of work covered, but that limitation is in itself a good thing. To cover in depth and completely, one unit of a laboratory problem is good educational technique. Material covered in this concentrated way is better understood and remembered (especially by us older types). But it is expensive. It is not so costly for a Medical Technology Society since the commercial houses pick up the tab. However, for a school the workshop method is extremely costly, especially in areas such as the South Pacific.

Another solution is to bring the workers to a school or hospital for an extended period—six to eight months. Thus, they can take class work regularly offered by the school or join the staff of the host hospital as a participating observer. This method is slow and few laboratories can afford to lose or replace temporarily a full-time technologist, especially if he is a key man.

Perhaps we must recognize that to keep ourselves abreast of the times, we will have to initiate and provide several types of continuing education with a variety of programs throughout the year. And I think this is being done with relative thoroughness for us here in the United States. But do we not have a further responsibility to help those in other places, particularly in Asia and the Pacific area, by providing them with opportunities for training and education as their hospitals advance and their needs become more sophisticated? How to do this surely "is a puzzlement," but what a challenge!

(Mrs.) Louise M. Wulff, MT(ASCP)

HMA Council Minutes *continued from 411*

It was noted that the *Medical Care Plans & Fees Committee* has met with ODMC, Veterans Administration, and the Workmen's Compensation Bureau. In each instance a fee schedule based on the Hawaii RVS converted at 5.00 for all sections has been requested. No new contracts have been signed yet. The ODMC has requested that if the Committee's proposal is accepted, that neither the Schedule of Allowances nor the conversion factor be published. An immediate answer to this was required before the Committee could act on it. The President agreed to this stipulation. No answer has been received. The present contract expires March 31. Council approval to sign one-year contract was sought.

ACTION:

It was voted that we not accept any contract with a conversion factor of less than 5.00.

It was voted to accept the reports as discussed and amended.

Dr. Chinn reported for the following committees: AMA-ERF, Awards, Bylaws & Parliamentary Crippled Children, and Pension & Investment Committees.

The *Pension and Investment Committee* voted not to disburse PBF funds until a larger corpus is acquired and not to use the Fund for loans to physicians starting in practice. It also voted to withdraw $20,000 from the savings and loan companies and put it in Bank of Hawaii time certificates as of July 1. It was pointed out that only two banks pay as much or more interest than the Savings & Loan accounts (City Bank and American Security both pay 5%). Bank of Hawaii pays 4½% and First National Bank 4⅝%. Savings & Loans accounts generally pay 4.75% but we have one account that pays 4.85%. At the present time no Association account is in any Savings & Loans or bank in an amount in excess of the amount that is federally insured ($10,000). The Treasurer has recommended putting $20,000 of HMA funds in TD certificates. If this is done, then the PBF funds cannot be handled similarly and still be federally insured.

ACTION:

It was moved and seconded that the Council recommend to the Pension and Investment Committee that it reconsider the matter of putting $20,000 in TD certificates. The motion was tabled.

It was voted to support the Pension & Investment Committee.

It was voted to accept Dr. Chinn's reports as discussed and amended.

Dr. Fong's reports covering the Automotive Safety, Chronic Illness & Aging, Heart, Mental Health, and Radiation Committees were discussed.

The *Mental Health Committee* met and entertained the following items of business: (1) Asked Council approval for the Committee to enter into discussion with the Hawaii Psychiatric Society and the Department of Health concerning intake and release of mentally ill patients to State Hospital; and (2) Items of interest discussed were proposed amendments to the law on criminal responsibility referred to the Legislative Committee, Community Health Centers are being planned for The Queen's Hospital and perhaps St. Francis, and anticipated 1967 passage of Mental Health Interstate Compact by Governor Burns.

ACTION:

It was voted to approve the Mental Health Committee's request that it enter into discussion with the Hawaii Psychiatric Society and Department of Health.

It was voted to accept Dr. Fong's report as discussed and amended.

Reports by Dr. Ivy covering the Careers, Medicine & Religion, Public Relations, Message of the Month, News Media, Operation Pacific, TV-Radio, Health Fair, Japanese Speakers Bureau, Quackery, and Woman's Auxiliary Committees were discussed.

The question of whether the Health Fair should be on a County or State level was discussed.

ACTION:

It was voted to refer this matter to the House of Delegates at its Annual Meeting to decide whether or not the Health Fair should be on the County or State level.

It was voted to accept Dr. Ivy's report as discussed and amended.

Reports covering the Arrangements, Convention & Seminar, Publications, Scientific Program, and Water Safety Committees were presented by Dr. Pinkerton.

Convention & Seminar: The efforts of this Committee have been abortive in view of the opposition of some of the doctors whose loyalty lies with their specialty societies. It is questionable whether this Committee can ever perform in the manner outlined for it when it was set up and provide the funds it was hoped would accrue to the Association through its activities.

ACTION:

It was voted to let the matter lie until the Committee recommended that there is no need for such a Committee.

Publications Committee: The Editor wants to change the JOURNAL's mainland advertising affiliation. The change would not effect any immediate savings in the charges for collection and transmittal of mainland ads but it is believed that in the long run this would produce more revenue because the proposed setup (which is the operating arm for *California Medicine*) would charge on a fixed monthly basis and would probably produce more ads for additional revenue. Council approval of the proposed change was requested.

ACTION:

It was voted to approve the Editor's request for a proposed change.

Reports by Dr. Tomita covering the Legislative, Maternal & Perinatal Mortality Study, National Legislative, Pharmacy, and Medical Practice Act Committees were discussed.

National Legislation: This Committee feels that its work would be hamstrung if it had to wait for Council meetings to have its recommendations approved. It recommends that the reports of its meetings be circulated to all members of the Council and if it receives no objections to its stands within ten days, the Committee's recommended stand would become the official HMA position. Also the Committee would like the Council to approve the recommendations it has taken to date, to wit: (1) Opposition to the Hart bill (SB-2568) which would prohibit physicians from dispensing eyeglasses, drugs, appliances, etc. (2) Support of HR 13119, the clean air bill. (3) HR 92488, support of the AMA position relative to regulation of animals used in research and experimentation; i.e., limit bill to dogs and cats and eliminate section requiring licensing and regulation of research laboratories. (4) HR 9256, support AMA position and oppose this bill, which would provide direct Federal loans to group practice facilities, on the grounds that it is discriminatory and not needed. (5) Support of S. 2809 which would authorize funds under Hill-Burton for additional electrical systems. It is recommended that each of the four Hawaii Congressmen be advised of the HMA's position.

ACTION:

It was voted to accept the recommendations

continued page 424



WOULD YOU BELIEVE ONE SECOND?

That's how long it takes Telecheck's CDC 3100 Computer to scan one million pieces of information . . . then it types out answers without making mistakes (people can't do that). Saves a lot of money too. Have you asked for a free analysis of how Telecheck can help you? You haven't! Sorry about that. We're as near as your telephone.

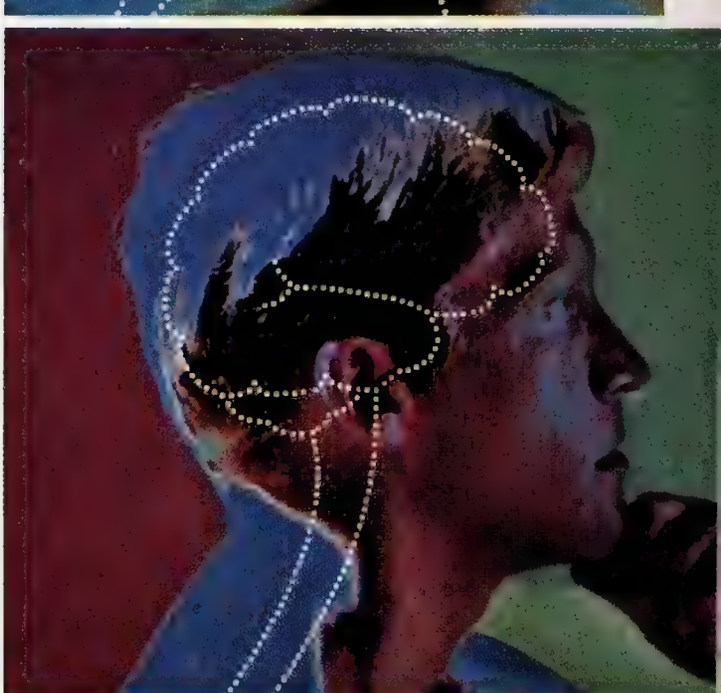
TELECHECK HAWAII, INC.

1350 SOUTH KING STREET · PHONE 567-737

BASIC BACTERICIDAL ANTIBIOTIC THERAPY IN INFECTIONS THROUGHOUT THE BODY







THE PENICILLIN YOU USE LIKE A BROAD-SPECTRUM ANTIBIOTIC

Instead of tetracycline or chloramphenicol—instead of erythromycin or triacetyloleandomycin—you can now treat bacterial infections with the first broad-spectrum penicillin—Polycillin (ampicillin trihydrate). Unlike these other agents, it is *bactericidal* (not merely bacteriostatic), exceptionally well tolerated and nontoxic. Now available in a form to suit any need—for children or adults—it is an ideal first choice whenever broad-spectrum therapy is called for.

Basic in Respiratory Infections

Polycillin (ampicillin trihydrate) is effective against the most common respiratory pathogens—*D. pneumoniae,* streptococci, and sensitive staphylococci; against *H. influenzae* it is unexcelled. In more than 300 respiratory cases, cured or improved responses were noted in 97%.[1] (Note, however, that ampicillin is not indicated in *resistant* staphylococcal infections.)

An Innovation in G.U. Infections

Polycillin (ampicillin trihydrate), with its extended spectrum, is effective where penicillins were rarely effective before—*throughout* the urinary tract. It was "...the most effective drug tested against *E. coli* and *P. mirabilis.*"[2] In over 300 evaluated G.U. infections, it elicited favorable clinical response in 96.5% of 115 cases of gonorrheal urethritis and 85.1% of other urinary-tract infections.[1]

A New Approach to Meningitis

In the treatment of bacterial meningitis, the clinical success with Polycillin-N (sodium ampicillin) for Injection in 192 patients (compared with 261 patients treated with chloramphenicol and/or penicillin G) was so uniformly excellent against each of the meningeal pathogens (pneumococci, meningococci and *H. influenzae)* and so well tolerated and free of toxicity—that the investigators concluded: "...the advantages of a single drug and the absence of significant toxicity suggest that this agent be considered the drug of choice for the initial treatment of bacterial meningitis...."[3]

New Strengths for More Severe Infections: 500-mg. Capsules; and, for Oral Suspension, new 250 mg./5 ml. in 80-ml. bottles.

New Size for Greater Economy: 150 ml. for Oral Suspension—125 mg./5 ml.

Also Available: 250-mg. Capsules; and, for Oral Suspension, 125 mg./5 ml. strength in 60- and 80-ml. bottles. For I.M. and I.V. use: Polycillin-N™ (sodium ampicillin) for Injection, 250 and 500 mg

References: 1. Published reports and data on file at Bristol Laboratories. 2. Anderson, K.N., *et al.:* JAMA *187*:555 (Feb. 22) 1964. 3. Mathies, A.W., Jr., *et al.:* Synopsis of experience with ampicillin in bacterial meningitis. Presented at 4th Internat. Cong. Chemother., Washington, D. C., Oct. 18-21, 1965.

BRISTOL THERAPEUTIC SUMMARY: For complete information, consult Official Package Circular.

Indications: Infections due to susceptible strains of Gram-negative bacteria (including Shigellae, *S. typhosa* and other Salmonellae, *E. coli, H. influenzae, P. mirabilis, N. gonorrhoeae* and *N. meningitidis)* and Gram-positive bacteria (including streptococci, pneumococci and nonpenicillinase-producing staphylococci).

Contraindications: A history of serious allergic reactions to penicillin and infections due to penicillinase-producing organisms.

Precautions: Typical penicillin-allergic reactions may occur, especially in hypersensitive patients. Mycotic or bacterial superinfection may occur. Experience in newborn and premature infants is limited and caution should be used in treatment with frequent organ function evaluations. Safety for use in pregnancy is not established. In gonorrheal therapy, serologic tests for syphilis should be performed initially and monthly for 3 months. Assess renal, hepatic and hematopoietic function intermittently during long-term therapy.

Adverse Reactions: Skin rash, pruritus, urticaria, nausea, vomiting, diarrhea and anaphylactic reactions. Mild transient elevations of SGOT or SGPT have been noted.

Usual Dosage: Adults—250 or 500 mg. *q.* 6 *h.* (according to infection site and offending organisms). Children—50-100 mg./Kg./day in 3 to 4 divided doses (depending on infection site and offending organisms). Children weighing more than 20 Kg. should be given an adult dose. Beta-hemolytic streptococcal infections should be treated for at least 10 days.

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York

A dosage form for every patient

Polycillin®
(ampicillin trihydrate)
CAPSULES

Polycillin®
(ampicillin trihydrate)
FOR ORAL SUSPENSION

Polycillin-N™
(sodium ampicillin)
FOR INJECTION – I.M./I.V.

HMA Council Minutes *continued from 420*

made by the National Legislative Committee on the five bills outlined in the report.

It was voted that the four Hawaii Congressmen be advised of the HMA's position.

It was voted to approve the Committee's suggested protocol for establishing the HMA official position on national legislation.

It was voted to accept Dr. Tomita's reports as discussed and amended.

Reports covering the Diabetes and Disaster Committees were discussed.

ACTION:

It was voted to accept these reports.

UNFINISHED BUSINESS

Appointment of New Committee to look into the future of medicine was reported on by Dr. Allison who felt such a Committee should be appointed.

NEW BUSINESS

Invitation to World Medical Association.

ACTION:

It was voted that the HMA extend this invitation as long as it does not conflict with HMA meetings.

The meeting was adjourned at 11:55 P.M. ■

O. D. PINKERTON, M.D.
President

Perinatal Death Study *continued from 405*

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations were arrived at unanimously by the Committee:

(1) Excessive weight gain during any pregnancy reflects poor prenatal care, but had no bearing on the outcome of this case.

(2) Meconium staining in the amniotic fluid is not per se an indication of fetal distress in the absence of irregularity or slowing of the fetal heart rate.

(3) Artificial rupturing of the membranes in this case was justified, but the complication of prolapse of the umbilical cord is a calculated risk, and the person who does rupture the membranes is responsible for this catastrophe if it should occur at that time.

(4) It is extremely doubtful that the diagnosis of high arrest can be justified in this case because the cervix was not completely dilated and labor was progressing satisfactorily. The diagnosis of high arrest can be made only if labor does not progress after complete dilatation of the cervix over a period of one to two hours.

(5) Forceps should not have been applied when the presenting part was unengaged. All reputable textbooks in obstetrics and all authorities on the use of forceps agree on this. In addition, the forceps were applied despite incomplete dilatation of the cervix; thus two of the most important contraindications to the use of forceps were ignored. Even prolapse of the umbilical cord does not justify the use of forceps under these circumstances.

(6) After the fetus expired following the traumatic attempt at vaginal forceps delivery, cesarean section was done. Justification for cesarean section was not present. Actually possible contamination of the uterus is one of the contraindications for classical cesarean section, which was the procedure used in this case. Since the fetus was already dead, the patient should have been allowed to labor and deliver through the vaginal route if at all possible. With fetal death the bony configuration of the fetus will collapse and even though the fetus may be quite large, vaginal delivery is possible in the majority of instances. ■

THE MATERNAL AND PERINATAL MORTALITY STUDY COMMITTEE

Notes and News *continued page 416*

in Hawaii. Nominated were **Lucius Eckles** and **Robert Spencer** (who has left the islands).

The Hawaii Fluoridation Council's list of directors includes such men of prominence as **Windsor Cutting, William Moore,** and **George Schnack,** but the legislators were still not impressed and turned down the bill. **John Lowrey** and **Masato Hasegawa** were nominated to the Aloha United Fund Board of Directors. Let's give until it hurts . . . Ouch! Eagle Scout **John Stephenson** will head the Health and Safety Committee of the Boy Scout's Aloha Council.

The Thoracic Society elected Marine Colonel **Frank Miller,** President; **Carl Mason,** Vice-President; and **William Myers,** Secretary-Treasurer. **Fred Giles, Peter Kim, George Henry,** and **Robert Weiner** are members of the Executive Committee. The Honolulu Pediatric Society elected **L. T. Chun,** President, and **James Mertz,** Secretary-Treasurer. **Roy Kaye,** we were reminded, was elected a Fellow of the American Academy of Pediatrics last October.

Doctors in Print

We congratulate the following: **Robert Jim** and **C. D. Lauriault** for their "Diphenylhydantoin Toxicity; Lymphadenopathy and Low Platelet Count" *Pediatrics,* V. 37, #2 (Feb.) 1966; **Robert Jim,** *et al.,* for "A Chinese Variant of Glucose-6-Phosphate Dehydrogenase" *J. Lab. & Clin. Med.,* V. 67 (Mar.) 1966; **Grant Stemmerman** for "An Histologic and Histochemical Study of Familial Osteoectasia" *Amer. J. of Path.,* V. 48 (Apr.) 1966; and all those listed in the *Pacific Medicine and Surgery,* V. 74 (Jan.-Feb.) 1966 Special Section—Straub Clinic: **J. E. Strode, R. H. Nordyke, E. M. Bitte, H. W. Goebert, Jr., C. M. Burgess, W. H. Gulledge, E. R. Dykes, E. L. Chesne, R. Mamiya, A. S. Hartwell, N. M. Scully, W. P. G. Jones, W. H. Hindle, I. L. Tilden,** *et al.*

Conference Humor

During a formal lecture with color slides, visiting professor **Ralph Platou** defined a disease complex caused by adenovirus 9 which causes apthous ulcers of the upper palate and a rather livid rash over the buttocks as "Asinine Disease."

During a derm conference, a patient with cutaneous

prophyria who had been drinking six to eight bottles of beer a day was being discussed. **Bob Kim** pointed out that the patient did well without treatment when he stopped the beer intake, but sympathetic **Harry Arnold** was quick to retort, "But shucks, he can't drink any beer." Such are the vicissitudes of life.

During a death conference, a case with high spinal fluid protein and a positive Babinski was being reviewed. **Mort Berk** inquired, "How many saw the Babinski?" **Phil Jones** proudly proclaimed, "I and an attending neurologist." Fellow resident **Brian McGrath** was quick to protest, "But that makes only 1½." Autopsy report: No CNS pathology.

Visiting Physicians

Ralph V. Platou, Chairman of the Pediatrics Department of Tulane University School of Medicine and President Emeritus of the American Board of Pediatrics, was visiting professor at Children's Hospital for two weeks. He feels that the biggest problem facing pediatricians today is the lack of time to really get to know their patients. He estimates a shortage of 70,000 pediatricians in the next 10 to 15 years and feels that we need twice as many medical schools in the next 15 years.

Irving Yalom, Assistant Professor of Medicine at Stanford, gave a series of lectures in February at The Queen's Hospital Mental Health Clinic.

FREE CANCER SERVICES

Did you know that your American Cancer Society provides these services free for cancer patients?

Sick room equipment such as hospital beds, wheel chairs, portable commodes, and personal items.

Transportation to and from the doctor's office or hospital for treatment.

Dressings, including bed pads, tape, any size bandage, colostomy bags.

Also provided is a special drug program.

HAWAII CALENDAR*

HMA ANNUAL MEETING, May 17-21, 1967, in Honolulu, Hawaii. **AMA ANNUAL CONVENTION,** June 26-30, 1966, Chicago. **PAN-PACIFIC SURGICAL** Association 10th Congress, Part I, September 20-28, Princess Kaiulani. Parts II and III to follow in Japan, Hong Kong, The Philippines, Thailand, India, Singapore, Australia, and New Zealand.

JUNE

June 19-25—**Convention,** 7th Annual Western Conference of Foundation for Medical Care. Ilikai Hotel.

JULY

July-August—**Visiting Professor** Robert Cooke, M.D., in Pediatrics, Johns Hopkins. Children's Hospital.

July 11-26—**Visiting Professor** Thomas Brenn, M.D., Professor of Medicine, University of Southern California. St. Francis Hospital.

July 17—**Symposium,** sponsored by Lederle and the Honolulu County Medical Society.

July 16-22—Fourth International Cardiovascular **Conference.** Royal Hawaiian Hotel. Contact: Dr. Verne J. Wilson, 1347 Capital Ave., Des Moines, Iowa.

AUGUST

August, 1966—**Visiting Professor** Ralph D. Sterling, M.D., Professor of Surgery. The Queen's Hospital.

August 1-6—USC **Postgraduate** Refresher Course (9th Annual). Princess Kaiulani Hotel.

August, 1966—**Visiting Professor** Jan Waldenstrom, M.D., from Sweden, Professor of Medicine. The Queen's Hospital.

* Errors in listings are not the responsibility of the HAWAII MEDICAL JOURNAL.

continued page 428

CUTEST UNIFORMS

Where Fashion is Foremost with Women in White

GOOD SERVICE IS UNIFORM WITH US

★

Our New Location is at

1969 S. KING ST. • PHONE 964-886

New Proprietor

Mr. Arthur M. H. Chung

★

We Carry All Name Brand Uniforms and Also Doctors' Jackets and Smocks

★

We Specialize in Custom Made Uniforms

The Charm of Old and New Hawaii

Lovely home of 3-bedrooms and 3-baths with large courtyard facing lush foliage and small, running stream. Formal dining room, music room, family room. Separate 2-bedroom, guest cottage. All on over 27,000 foot, fee simple lot in Nuuanu. A real find at $79,500.

•

ISLAND HOMES

Office: 916 Fort St. — 569-611

Eves: Phil Thomas (R) 560-177


Flagyl destroys trichomonads
here & here & here & here
No topical treatment can

Flagyl®

brand of

metronidazole

Flagyl eliminates the difficulties and frustrations that have long attended the treatment of trichomonal infection.

These difficulties arose mainly from:

1) the failure of any previously known agent to destroy the protozoan in paravaginal crypts and glands;

2) the failure of any previously known agent to prevent reinfection by eradicating the disease in male consorts.

The introduction of Flagyl removed both of these long-standing deficiencies. Hundreds of published investigations in thousands of patients have confirmed the ability of Flagyl to cure trichomoniasis.

Correctly used, with due attention to repeat courses of treatment for resistant, deep-seated invasion and to the presumption of reinfection from male consorts, Flagyl has repeatedly produced a cure rate of up to 100 per cent in large series of patients.

Nothing cures trichomoniasis like Flagyl.

Dosage and Administration

In *women:* one 250-mg. oral tablet t.i.d. for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When the inserts are used one vaginal insert should be placed high in the vaginal vault each day for ten days, and concurrently two oral tablets should be taken daily.

In *men:* in whom trichomonads have been demonstrated, one 250-mg. oral tablet b.i.d. for ten days.

Contraindications

Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precautions and Side Effects

Complete blood cell counts should be made before and after therapy, especially if a second course is necessary.

Infrequent and minor side effects include: nausea, unpleasant taste, furry tongue, headache, darkened urine, diarrhea, dizziness, dryness of mouth or vagina, skin rash, dysuria, depression, insomnia, edema. Elimination of trichomonads may aggravate moniliasis.

Dosage Forms

Oral–250-mg.tablets/Vaginal–500-mg.inserts

SEARLE

Research in the Service of Medicine

Hawaii Calendar *continued from 425*

SEPTEMBER

September 20-28—**Tenth Congress of the Pan-Pacific Surgical Association.** Princess Kaiulani Hotel. Local Contact: Dr. Verne C. Waite, Alexander Young Bldg., Honolulu.

OCTOBER

October 10-21—**Visiting Professor** David Karnousky, M.D., Neoplastic Chemo. The Queen's Hospital.

October 20-28—**Convention,** American Orthotics & Prosthetics Association. Ilikai Hotel.

October 31-November 3—HCMS **Postgraduate** Lecture Series. 8:00-9:00 A.M. Mabel Smyth Auditorium. ■

County Society News *continued from 410*

it would be the county's duty to go to the public and explain the stand and why the subscribers would not receive the new benefits. The motion was again made that the KCMS accept the cancellation of its contract with HMSA, effective February 18, 1966, and the 120-day waiting period be waived. The motion carried. It was then voted that KCMS inform HMSA that the Society had voted and that the Society wished all negotiations to be carried out through the HMA's Medical Care Plans & Fees Committee.

In answer to an inquiry from Aetna, it was moved that the KCMS inform them that the Society was agreeable to accept their offer of the use of the RVS with the conversion of 5.00. The question arose whether the same offer had been made to all counties and the previous motion was amended to insert the words "and other insurance companies" after HMSA. It was voted to refer Aetna to the Medical Care Plans & Fees Committee of the HMA.

The Society was advised of the services available through the Hawaii Medical Library. It was then voted to advise a representative of an investment broker that the Society meetings were concerned with medical matters and he could, if desired, contact individual members.

HMSA appointments were discussed. No action was taken pending receipt of additional information.

Maui

The November 18 meeting followed the hospital staff meeting. Drs. Morris and Stewart were present as guests. HMSA negotiations were discussed and the members requested return visits of HMSA and HMA representatives. Discussion on the Honolulu Foundation for Medical Care program was deferred until a representative from HMA was present. Drs. Wong, Kashiwa, and Sowers were appointed to the Nominating Committee. A request from Drs. Ivar Larsen and C. S. Chung relative to a research project on club foot was approved. It was voted to permit any two of the three officers to sign checks.

* * *

Two special meetings were held during December. On December 2 Drs. George H. Mills and Chew Mung Lum were present to discuss HMSA negotiations and the Honolulu Foundation for Medical Care. On December 9, Dr. Verne C. Waite and Mr. Albert Yuen were present to discuss the HMSA situation.

* * *

The annual meeting was held on December 21 at Kula Lodge. Drs. Charles W. Stewart and John F. Morris were accepted as new members. A short discussion was held in regard to the cytology screening program proposed by the Department of Health. The following new officers were elected: Kenneth A. Haling, President; Billie Fern Strother, Vice-President; Sakae Uehara, Secretary-Treasurer. Before turning the meeting over to the newly elected president, Dr. Marion Hanlon spoke briefly on the problems facing the Society with special emphasis on the role of the Utilization Committee.

Book Reviews *continued from 413*

tions for treatment are given, based on his great clinical experience, but controversial aspects are clearly indicated. The illustrations are good, especially the reproductions of x-rays, which are superior to those in most other pediatric texts. Also of real value are the several appendices to this book, including principles of nursery care, resuscitation procedures, and management of erythroblastosis. For reference purposes, the pharmacopeia for the newborn, and the broad representative bibliographies ending each chapter, are outstanding.

On the other hand, the lavishness of publication is a bit uncomfortable to anyone paying the high cost of this book. There is an excess of essentially blank pages; the table of contents is unnecessarily detailed, totaling 17 pages; and there is unnecessary duplication in the text. For example, tracheoesophageal fistula is described under both the respiratory system and the esophagus. And, finally, the usual disagreement over emphasis can be made; e.g., major topics such as staphylococcal infections and congenital lues have gotten short shrift.

The major section on cardiovascular disorders, written by Dr. Markowitz, is well organized, if uninspiring. Dr. Finberg's brief chapter on fluid balance is too sketchy, with minimal mention of such areas as hypernatremia and alkalosis.

In summary then, this is a major reference work deserving a prominent place in every facility for care of new babies, but probably not indicated in most personal libraries.

JOSEPH OREN, M.D.

★Pediatric Electrocardiography: Normal and Abnormal Patterns, Incorporating the Vector Approach

By Warren G. Guntheroth, M.D., 150 pp., $7.00, W. B. Saunders Company, 1965.

THIS TEXT, I believe, is the first devoted exclusively to interpretation of pediatric EKG's, and fulfills a distinct need since adult norms and standards cannot be used in interpreting the electrocardiograms of infants and young children.

The value of vectorcardiography has by now been established but vectorcardiography has not supplanted scalar electrocardiography. Rather, scalar EKG's are being interpreted vectorially and this text incorporates the vector approach to the interpretation of the standard EKG.

Despite the many illustrations, the EKG patterns in this book are not merely patterns to be memorized but are mainly examples to illustrate and emphasize the physiologic forces resulting in these patterns.

This brief, concise book is excellent.

FRANCES F. NAKAMURA, M.D.

Play Therapy with Mentally Subnormal Children

By Henry Leland, Ph.D., and Daniel E. Smith, M.S., 240 pp., $7.75, Grune & Stratton, 1965.

THIS BOOK is based on the authors' experience at Parsons State Hospital and Training Center in Kansas. They point out that play therapy is primarily a learning process and describe methods of treatment, the materials used in various environmental settings, and the therapeutic approach utilized. Further, play therapy can be

The sections on the normal splenoportogram and on manometry are quite good. Further enlargement of the effectively used to evaluate intelligence, to aid the child in concepts of personal responsibility, self-expression, and development of relationships.

The clear style of writing makes for easy reading. The book is primarily for clinical psychologists, but anyone handling subnormal children will derive much benefit from exposing themselves to it.

DUKE CHO CHOY, M.D.

Progress in Liver Diseases, Vol. II

Edited by Hans Popper, M.D., Ph.D., and Fenton Schaffner, M.D., M.S., 554 pp., $17.75, Grune & Stratton, 1965.

THIS VOLUME'S 31 CHAPTERS cover the latest advances of the entire spectrum of hepatic physiology and disease. Each chapter is by a recognized authority in the area under discussion. This approach offers the advantages of the expert, but is handicapped by a variety of skills of presentation. As a pathologist, this reviewer thought Steiner's chapter on ultrastructural pathology and Post's chapter on cell replication of great interest. Unfortunately the editing leaves much to be desired, as evidenced by the first chapter, where lapses in comma placement render sentences opaque. On the whole, however, this is a most valuable volume, and deserves a place on the shelf of the gastroenterologist, surgeon, and pathologist.

G. N. STEMMERMANN, M.D.

The Electrocardiogram and Vectorcardiogram in Congenital Heart Disease

By Mario R. Garcia-Palmieri, M.D., F.A.C.P., F.A.C.C., Roberto C. Rodriguez, M.D., F.A.C.P., and Carlos E. Girod, M. D., 123 pp., $6.50, Grune & Stratton, 1965.

THIS BOOK REPRESENTS an effort by the authors, who are able cardiologists in Puerto Rico, to provide a special reference for the electrocardiogram and vectorcardiogram in congenital heart disease only. Two or three relatively large text books in the recent past have tried to encompass all of electrocardiography and vectorcardiography. I know of no other attempt to provide such a special reference; in this respect the volume probably stands by itself. Its organization is logical and its illustrations are adequate; its language suggests the possibility that the author may find another tongue more comfortable.

The approach taken in this book, particularly to vectorcardiography, is somewhat more pragmatic than that in the larger volumes mentioned above and, as such, appears to be somewhat more primitive to me. Particularly outstanding in this regard is the continued reference to diastolic and systolic overload pattern in reference to the types of ventricular hypertrophy. Most American vectorcardiographers have discarded these terms because they feel better explanations for the patterns so named are available from vectorcardiography.

Despite the above features, this book presents a one-of-a-kind effort; it is fairly well organized; it is short and to the point; and it certainly will contribute some knowledge to those who are interested in electrocardiography and vectorcardiography.

EDWARD L. CHESNE, M.D.

Fundamentals of Orthopaedics

By John J. Gartland, A.B., M.D., 338 pp., $8.00, W. B. Saunders Company, 1965.

THIS BOOK is a good primer for the medical student or for the general practitioner who has forgotten what orthopedics one learns in medical school. It covers quite a bit of ground as regards orthopedics and orthopedic surgery; however, as the title implies, it does not cover the full scope of orthopedic surgery in its 324 pages, which would be quite impossible to do. For the medical student, I think this book is much easier to read than the books previously published on orthopedic surgery. The more common disorders that one sees in office orthopedics are covered. Of interest to the physicians treating the so-called strain of cervical paravertebral muscles following rear-end collisions, is the posterior cervical syndrome, discussed briefly. For more complete information one would have to refer to other books specifically dealing with disorders of the shoulder, of the knee, etc. This, as stated above, only touches on the fundamentals of orthopedics.

ICHIRO NADAMOTO, M.D.

Splenoportography: Diagnostic Phlebography of the Portal Venous System

By Lucien Leger, M.D., 121 pp., $8.50, Charles C. Thomas, 1966.

THIS MONOGRAPH is successful, although the material in chapter one on technique is quite meager. More photographs illustrating the methods would have been helpful.

continued page 430

OCEANSIDE GOLF
on beautiful Kauai

Enjoy uncrowded golfing any day of the week, any week of the year at championship Wailua Golf Course . . . just across the street from your delightful Polynesian accommodations at

Coco Palms Resort



Rates from $17 per day, double
Special group package rates also available

Island Holidays Resorts



Call 931-111 for information and reservations

discussion on free and wedged suprahepatic venous catheterization and the pathophysiology of the sinusoidal blocks might have enhanced these sections.

Part two of this book contains some excellent illustrations and a generally satisfactory discussion of the pathological conditions of the splenoportal area. As in part one, a disturbing factor has been the fact that too many paragraphs are only one sentence long. Cohesion and continuity are not particular virtues in this book. In general, it is suitable for perusal.

WALTER Y. M. CHANG, M.D.

General Pathology: The Biological Aspects of Disease

By J. F. A. McManus, M.D., 739 pp., $16.00, Year Book Medical Publishers, 1966.

THIS BOOK PRESENTS briefly some of the more recent work in the field of general pathology and will be useful to the student as an auxiliary text and reference source.

RICHARD R. KELLEY, M.D.

Neurological Surgery of Trauma

Editor in Chief Colonel John Boyd Coates, Jr., MC, USA. Prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General, United States Army, 604 pp., $6.25, U. S. Government Printing Office, 1965.

WITH THE PRESENT INCREASE of United States military involvement in Southeast Asia, this text makes a timely appearance. An imposing group of men who served in World War II and the Korean conflict have collected their experiences in this volume.

As is the case with many multi-authored collections, each author is given a relatively free hand, and widely divergent opinions are expressed, as for example in the use of narcotics for the treatment of head trauma.

Some of the chapters are well written for both the civilian and military neurosurgeon. Other chapters, dealing with the organization and setting-up of field neurosurgical units, are written strictly for the military surgeon. For those who are interested in the neurophysiology of spasticity, both cerebral and spinal cord types, Robert F. Heimburger has written an excellent review of present day concepts.

Illustrations are profuse, large, and clearly printed. Minor faults in editing, such as the reversal of captions on pages 486 and 487, do not detract from the volume as an informative one for those who treat trauma of the nervous system. The price is well worth it.

WILLIAM T. WON, M.D.

★Burns: A Symposium

Compiled and edited by Leon Goldman, M.D., and Richard E. Gardner, M.D., 191 pp., $7.75, Charles C. Thomas, 1965.

THIS SUMMARY of a Burn Symposium held at the University of California School of Medicine serves as a good review of the latest ideas and technics in the treatment of burns. All phases of burns therapy are covered, from the initial fresh injury to late secondary problems, and from thermal injuries in the young to the old.

Regional differences in burn therapy are outlined from various burn treatment centers in the country.

It concludes with a section on the future of grafting procedures, with excellent discussions on homografts and more recent studies on the transplantation of tissue.

VERNON JIM, M.D.

Gastroenterology, Vol. III, 2d Ed.

By Henry L. Bockus, M.D., 1,352 pp., $30.00, W. B. Saunders Company, 1965.

THIS MONOGRAPH is really a series of independent monographs that give a great deal of detailed information on several subjects. There are several hundred references behind each section, permitting one to probe even further in depth, should the need arise. This book is highly useful to anyone interested in the subject of gastroenterology.

Much of the volume deals with the liver and its afflictions. The section on Anatomy and Physiology includes electron microscopic pictures, both actual and diagrammatic, and also includes all the newer metabolism of bile and its application to the classification of jaundice. The classical diagnostic procedures are all included, plus angiography and radioisotopic studies as an aid to diagnosis of liver diseases. There are sections on metabolic disorders of the body that involve the liver. A separate section on the gall bladder emphasizes diagnosis and gives some consideration to surgical treatment. The postcholecystectomy syndrome is very nicely discussed.

Another large portion of the volume is dedicated to the pancreas and its diseases. The anatomy and physiology again includes electron microscopy. The usual tests of pancreatic functions are included with a rather extensive section on x-ray and isotopic scanning and their uses in diagnosis.

The remainder of the book is devoted to smaller sections including functional disorders, autoimmune diseases that involve the digestive tract, a separate section on collagen diseases, and another one on gastrointestinal allergy.

RAYMOND M. DEHAY, M.D.

Also Received

Aphorisms and Facetiae and of Bela Schick

By I. J. Wolf, M.D., 50 pp., illus., no price quoted, Waverly Press, 1965.

A BOSWELLIAN memoir about a great pediatrician, physician, and humanitarian.

Ciba Foundation Study Group No. 20 Functions of the Corpus Callosum

In honour of the Rt. Hon. Lord Adrian, O.M., Editor and organizer E. G. Ettlinger, M.A., Ph.D., 156 pp., $3.75, Little, Brown and Company, 1965.

ANOTHER EXHAUSTIVE symposium, done in the usual excellent manner, for those interested in the function of this large forebrain commissure.

★Principles of Chest Roentgenology: A Programmed Text

By Benjamin Felson, M.D., Aaron S. Weinstein, M.D., and Harold B. Spitz, M.D., 221 pp., $6.00, W. B. Saunders, Company, 1965.

AN EXCELLENT programmed text on chest roentgenology prepared primarily for nonradiologists.

Psychopathology of Perception

Edited by Paul H. Hoch, M.D., and Joseph Zubin, Ph.D., 336 pp., $12.50, Grune & Stratton, 1965.

A DETAILED STUDY of perceptual anomalies seen in neuropsychiatry.

Orienting Reflex and Exploratory Behavior

Edited by L. G. Voronin, A. N. Leontiev, A. R. Luria, E. N. Sokolov, and O. S. Vinogradova, pp. 462, 1958.

A TRANSLATION of a Russian monogram on the orienting-explanatory reaction.

Sexual Behavior in the Human Female

By the Staff of the Institute for Sex Research, Indiana University, Alfred C. Kinsey, Wardell B. Pomeroy, Clyde E. Martin, and Paul H. Gebhard, 863 pp., $1.65, Pocket Books, Inc., 1965.

THIS REPORT is now in paperback form.

Advances in Blood Grouping, Vol. II

By Alexander S. Wiener, M.D., F.A.C.P., with a section by Maurice Shipiro, M.B., B.Ch., F.C., Path., 454 pp., $12.50, Grune & Stratton, 1965.

A COLLECTION of papers on the serology, genetics, and nosology of blood groupings, pioneered by the author.

★Development and Disorders of Written Language, Vol. I

By Helmer R. Myklebust, 275 pp., $7.75, Grune & Stratton, 1965.

HIGHLY RECOMMENDED for those interested in the analysis of the written word as a means of diagnosing disorders of verbal behavior.

Acting Out: Theoretical and Clinical Aspect

Edited by Lawrence Edwin Abt, Ph.D., and Stuart L. Weissman, Ph.D., 330 pp., $11.50, Grune & Stratton, 1965.

THE CONCEPTS, clinical manifestations, testing, and management of acting out are discussed comprehensively in this text.

Operating Room Manual: A Guide for O.R. Personnel, 2d Ed.

By Mary Ellen Yeager, R.N., 313 pp., $7.00, Putnam's Sons, 1965.

A USEFUL manual.

The Management of the Diabetic Patient

By Elaine P. Ralli, M.D., F.A.C.P., D.I.M., 207 pp., $7.00, G. P. Putnam's Sons, 1965.

AN ELEMENTARY guide for the practicing physician regarding diabetic therapy.

Modern Treatment, Vol. 2, No. 5 & No. 6

Edited by D. Joseph Demis, M.D., J. Alfred Rider, M.D., and Hugo C. Moeller, M.D., $16.00 per year, Hoeber Books, 1965.

THESE TWO BIMONTHLY editions discuss the treatment of venous disorders, ENT disorders, skin diseases and bowel malfunctions.

★The Pathogenesis of Cardiac Cachexia

By Joseph G. Pittman, M.D., and Phin Cohen, M.D., 88 pp., $5.25, Grune & Stratton, 1965.

THE MULTIPLE FACTORS involved in the pathogenesis of this not too uncommon problem are clearly presented in this short monogram. Highly recommended for those involved in the care of cardiac patients.

★Immediate Care and Transport of The Injured

Compiled and edited by George J. Curry, M.D., F.A.C.S., 187 pp., $7.50, Charles C. Thomas, 1965.

RECOMMENDED for physicians involved in the care of traumatic injuries. There is a complete discussion of all phases of care and transportation of the injured patient.

Hospital Pharmacy

By William E. Hassan, Jr., Ph.D., 347 pp., $11.50, Lea & Febiger, 1965.

A COMPREHENSIVE discussion of the problems and methods of a hospital pharmacy. Although written for phar-

continued from 432

MEDICAL PLACEMENT BUREAU
and
NURSES' REGISTRY

24 HOUR SERVICE

LET US SERVE YOU IN YOUR NEED

Nurses, Staff and Office
Nurses, Private Duty
Nurses, Supervisors
Practical Nurses
Nurses, Aide
Dental Assistants
Physical Therapists
X-Ray Technicians
Laboratory Technicians
Medical Stenographers
Medical Clerks
Receptionists
Male Nurses
Bookkeepers
Home Companions

Frieda M. Beezley, R.N., *Director*
Patsy Harrison, *Secretary*

1473 South King St. **991-237**



macists, this may be useful for committee members of the hospital pharmacy.

Roots of Modern Psychiatry

By Mark D. Altschule, M.D., 208 pp., illus., $6.50, Grune & Stratton, 1965.

PROVOCATIVE ESSAYS on the medical psychology of bygone eras, on e.g., "allegorical somatognosy," the "incestuous hippopotamus." An essay on the pineal gland omits mention of melatonin!

How Physicians Think

By Emanuel Goldberger, M.D., F.A.C.P., 182 pp., illus., $7.50, Thomas, 1965.

AN ANALYSIS of how physicians think in diagnosis and treatment. The problems of semantics, classification of disease states, and the importance of treating patients and not diseases, are some of the topics discussed.

Current Concepts in Medical Practice

Edited by John E. Mullins, M.D., 436 pp., $10.75, The C. V. Mosby Company, 1965.

ANOTHER ATTEMPT to condense the current concepts of medical practice. Although it is the object of the editor to neither exhaust the subject or the reader, this balance is difficult to obtain to the satisfaction of most readers. The discussions seem applicable for the busy practitioner or the house staff physicians.

★Thoracic Surgery

U. S. Army Medical Department, 615 pp., illus., $6.25, U. S. Government Printing Office, 1965.

SIX DISTINGUISHED chest surgeons have produced this valuable treatment on chest surgery in wartime. Profusely illustrated, with a 70-page index!

★Ciba Foundation Study Group No. 21 Hashish: Its Chemistry and Pharmacology

In honour of Professor G. Joachimoglu, Edited by G. E. W. Wolstenholme, O.B.E., F.R.C.P., F.I. Biol., 96 pp., $2.95, Little, Brown and Company, 1965.

HASHISH is the resin of cannabis (marihuana). This symposium discusses the chemistry, action and dependence of this substance. It is a fascinating symposium which makes one wish more symposiums of this caliber could be done within the limits of 100 pages such as this one.

Ciba Foundation Symposium on Caries-resistant Teeth

Edited by G. E. W. Wolstenholme, O.B.E., F.R.C.P., F.I. Biol., and Maeve O'Connor, 338 pp., $12.50, Little, Brown and Company, 1965.

AN OUTSTANDING and comprehensive symposium concerned with advances in enamel research.

Ciba Foundation Symposium on Complement

Edited by G. E. W. Wolstenholme, O.B.E., F.R.C.P., F.I. Biol., and Julie Knight, B.A., 338 pp., $12.50, Little, Brown and Company, 1965.

A HIGHLY TECHNICAL discussion of this increasingly important component of the immune reaction.

Microhemocirculation: Observables and Their Biologic Control

By Elio Maggio, M.D., F.I.C.A., Preface by Samuel R. M. Reynolds, Ph.D., D.Sc., Dr.hc., 194 pp., $16.50, Charles C. Thomas, 1965.

A WELL-ILLUSTRATED text on a specialized biological process, the microhemocirculation (circulation in vessels 2-250 micra in diameter involved in tissue hemostasis). Its importance in tissue injury and circulatory disturbances is emphasized. ■

CONSIDERING
CONTACT LENSES?

Here's Good News!

Newly perfected Micro thin lenses now provide:

- Shorter fitting time
- Greater comfort
- Reduced period of adjustment to lenses

We continue to offer highest quality and finest service for all your optical requirements.

GUILD OPTICIANS
OPTICAL DISPENSERS
of Hawaii, Inc.

Additional location at:

1133 BISHOP ST. 576-570
312 ALA MOANA BLDG. 976-925

Your stationery is a reflection of you... be certain the reflection is good!

star-bulletin printing company

the hallmark of fine printing in honolulu

THREE TIMES A YEAR

Your patients without a plan to economically protect them when they are in need of medical assistance may join Hawaii's own community service medical plan on an individual basis three times a year.

Membership is open to qualified individuals of all ages in

MARCH — JULY — *and* — NOVEMBER

HMSA is a non-profit, community service organization. As such it is able to provide tremendous benefits for reasonably low dues.

HMSA is the medical plan which gives you free choice of doctors and hospitals — an extremely desirable feature.

Member of Western Conference of Prepaid Medical Service Plans



® BLUE SHIELD PLAN FOR HAWAII

HAWAII MEDICAL SERVICE ASSOCIATION

For 25 Years – Hawaii's Own / Hawaii Owned

WILLIAMS MORTUARY

"CHAPEL OF THE CHIMES"

1076 S. Beretania St., Phone 52-587 **Ample Parking Adjoining Mortuary**

OVER A CENTURY OF SERVICE

"Service measured not by gold but by the Golden Rule"

MEMBER

National Selected Morticians, National Funeral Directors Association,
Order of the Golden Rule, Hawaii Funeral Directors Association

Our "Angels"

American Factors, Ltd. 365
American Tobacco Co. 377
Ames Company, Inc. 435
Ayerst Laboratories 436
Bishop Trust Company 367
Bristol Laboratories 370, 371
Burroughs-Wellcome & Co. (U.S.A.), Inc. 369, 416
Carnation Company 382
Ciba Pharmaceutical Co. 381
Coca-Cola Bottling Co. of Honolulu 431
Cutest Uniforms 425
Davies, Theo. H., & Co., Ltd. 376
Eastman Kodak 380
Financial Management Institute 374
Geigy Pharmaceuticals 372
General Diagnostics 415
Hawaii Medical Service Association 433
Island Holidays 429
Island Homes 425
Kahanaola 368
Kaimuki Center 363
Lederle Laboratories, Inc. 323
Lilly, Eli, & Co. 361, 384
Medical Placement Bureau 431
O'Leary, Lydia, of Hawaii 434
Optical Dispensers of Hawaii, Inc. 432
Parke, Davis & Co. 362
Pitman-Moore Company 378, 379
Professional Services, A Division of Telecheck-Hawaii, Inc. 421
Robins, A. H., Co., Inc. 375, Insert
Roche Laboratories 383
Schuman Carriage Co., Ltd. 374
Searle, G. D., & Co. 426, 427
Star-Bulletin Printing Company 432
Williams Mortuary 434



BLEMISHES?

COVERMARK conceals all skin discolorations . . . birthmarks, brown & white patches, broken veins, tattoos, burns, scars, on any part of the body. COVERMARK is also unexcelled as an overall makeup . . . will not rub or flake off. Waterproof and Sunproof.

Lydia O'Leary

OF HAWAII

ALA MOANA CENTER—STREET LEVEL

PHONE 993-288

July-August, 1966

HAWAII MEDICAL JOURNAL



In this issue

Annual Meeting Transactions

Presidential Address

Aloha United Fund
—Editorial

Annual Index

Table of Contents 442

VOLUME 25 • NUMBER 6

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

27 years of clinical use... and still the most widely prescribed agent of its kind

Complete information for usage available to physicians on request. 81966

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

1866 1966 100th ANNIVERSARY

ese, H. H.: *Wisconsin*

l. 15:344, 1939.
an M. Soc. 38:317,

an, T. H.: *Ann. Int.*

iam, T. J.: *Arch. Neu-*
3, 1939.
c. 85:986, 1939.
). L., Jr., and Arnold,
). 66:522, 1939.

good, R.: *J.A.M.A.*

ett, C. L.: *Psychiat.*

shington Bull. 3:16.

tein, H. H.: *Am. J.*
0.
), V.: *Ann. Int. Med.*

.A.J. 43:157, 1940.

ne Med. Fac. 1:2,

ies 69:461, 1941.
allenberger, D. W.:
, 1941.
ll. Veterans Admin.

1:178, 1941.

155:105, 1942.
. Psychiat. 98:515,

120:449, 1942.
sychiat. 99:231,

70:244, 1942.
ner, C.: *J. Nerv. &*

, A. J.: *J.A.M.A.*

n, A. F.: *J.M.A.*

Queries & Minor Notes: *J.A.M.A.* 124:200, 1944.
Gingrass, R. P.: *Wisconsin M. J.* 43:934, 1944.
Vallotton, C. F.: *Virginia M. Month.* 71:159, 1944.

Butter, A. J. M.: *J. Neurol. Neurosurg. & Psychiat.* 8:49, 1945.
Lennox, W. G.: *M. Clin. North America* 29:1114, 1945.

Bashinsky, B.: *J.M.A. Georgia* 35:228, 1946.

Twitchell-Allen, D.: *Arch. Neurol. & Psychiat.* 57:617, 1947.
Keith, H. M.: *Am. J. Dis. Child.* 74:140, 1947.
Wigton, H. A.: *Nebraska M. J.* 32:272, 1947.
Hoefer, P. F. A.; Hoff, H. H., and Pluvinage, R. I. L.: *Tr. Am. Neurol. A.* 72:185, 1947.

Fabing, H. D., and Hawkins, J. R.: *Ohio M. J.* 44:257, 1948.
Thorne, F. C.: *Am. J. Psychiat.* 104:570, 1948.
DeJong, R. N.: *Am. Practitioner* 3:233, 1948.
Tudor, R. B.: *J. Lancet* 68:391, 1948.

Yannet, H.; Deamer, W. C., and Barba, P. S.: *Pediatrics* 4:677, 1949.
Silverstein, A.: *Am. Practitioner* 3:344, 1949.
Lennox, M. A.: *Am. J. Dis. Child.* 78:868, 1949.

Roseman, E.: *Postgrad. Med.* 8:419, 1950.
Ruskin, D. B.: *Am. J. Psychiat.* 107:415, 1950.
Chaiken, B. H.; Goldberg, B. I., and Segal, J. P.: *New England J. Med.* 242:897, 1950.

Forster, F. M.: *J.A.M.A.* 145:211, 1951.
Bakwin, R. M., and Bakwin, H.: *J. Pediat.* 39:776, 1951.
Ransone, J. T.: *Virginia M. Month.* 78:303, 1951.
Merlis, J. K.: *Neurology* 1:245, 1951.
Aird, R. B.: *Am. Practitioner* 2:777, 1951.

Sokolova, E. I.: *Zhur. nevropat. i psikhiat.* 53:385, 1953.

Davidson, D. T., Jr., and Lombroso, C.: *New England J. Med.* 251:853, 897, 1954.
Hopkins, S. J.: *Chemist & Druggist* 161:628, 1954.
Hernandez, R., L.: *J. Am. M. Women's A.* 9:188, 1954.

Drew, A. L.: *Postgrad. Med.* 18:327, 1955.
Williams, E. Y., and Carmichael, C. P.: *J. Nal. M. A.* 47:162, 1955.
Millichap, J. G.; Lombroso, C. P., and Lennox, W. G.: *Pediatrics* 15:705, 1955.

Murphy, J. T., and Schwab, R. S.: *J.A.M.A.* 160:385, 1956.
Livingston, S.: *Postgrad. Med.* 20:584, 1956.
Gruber, C. M., Jr.; Mosier, J. M.; Grant, P., and Glen, R.: *Neurology* 6:640, 1956.
Levy, L., and Shanbrom, E.: *Arch. Int. Med.* 97:599, 1956.
Utterback, R. A.: *Am. Pract. & Digest Treat.* 7:763, 1956.
Zimmerman, F. T.: *New York J. Med.* 56:2537, 1956.

Berry, R. G., in Spiegel, E. A. (ed.): Progress in Neurology and Psychiatry, New York, Grune & Stratton, 1957, vol. 12, pp. 199-211.
Daly, D. D.: *Proc. Staff Meet. Mayo Clin.* 32:257, 1957.
French, E. G.: *Am. J. Psychiat.* 113:629, 1957.
Maltby, G. L.: *J. Maine M. A.* 48:257, 1957.

Rupp, C., Jr.: *J.A.M.A.* 166:1967, 1958.
Peterman, M. G.: *Minnesota Med.* 41:196, 1958.
Livingston, S.: *J. Lancet* 78:182, 1958.
Carter, C. H.: *Arch. Neurol. & Psychiat.* 79:136, 1958.
Keith, H. M.: *J. Lancet* 78:461, 1958.
Farmer, T. W.: *South. M. J.* 51:173, 1958.
Hammill, J. F.: *J. Chronic Dis.* 8:448, 1958.
Snyder, C. H.: *Pediatrics* 21:308, 1958.

Yahr, M. D., and Merritt
Neurol. 1:76, 1959.
Thomas, M. H.: *J.A.M.A*
Peterman, M. G., and T
Times 87:1044, 1959.
Bray, P. F.: *Pediatrics* 2
Mulder, D. W.; Daly, D.
and Yoss, R. E.: *Postgra*
1959.
Forster, F. M.: *Wisconsi*
1959.
Robertson, E. G.: *Postg*
1959.

Schwade, E. D.: *Geriatr*
Schade, G. H., and Gofr
25:151, 1960.
Forster, F. M.: *Postgrad*
1960.
Livingston, S.: *J.A.M.A.*
Friedlander, W. J.: *Am.*
1960.

Kane, C. A.: *Boston Mec*
1961.
Holowach, J.; Renda, Y.
J. Pediat. 59:339, 1961
Baker, A. B.: *J. Lancet* 8
Roseman, E.: *Neurology*

Gruber, C. M., Jr.; Brock
M.: *Clin. Pharmacol. & T*
Walker, A. E.: *World Neu*

Pauli, L. L.: *Maryland M.*
Livingston, S.: *Clin. Pedi*
Forster, F. M.: *M. Clin. N*
47:1579, 1963.
Scholl, M. L.: *New Engla*
269:1304, 1963.

Kutt, H.; Winters, W.; Ko
McDowell, F.: *Arch. Neu*
Currier, R. D.: *GP* 30:12
Chao, D.; Sexton, J. A., a
J. Pediat. 64:499, 1964.



Butazolidin® alka

enylbutazone	100 mg.
ed aluminum droxide gel	100 mg.
gnesium trisilicate	150 mg.
natropine thylbromide	1.25 mg.

Usually works within 3 to 4 days in osteoarthritis

e trial period need not exceed 1 week. In ntrast, the recommended trial period for lomethacin is *at least 1 month.*

at's why it's logical to start therapy with tazolidin alka—you'll know quickly whether not it works. And usually, it will.

arge number of investigators have re- rted major improvement in about 75% of ses. Some patients have gone into remis- n. Relief of stiffness and pain may be fol- ved quickly by improved function and res- ution of other signs of inflammation. And tazolidin alka is well tolerated, especially nce it contains antacids and an antispas- odic to minimize gastric upset.

ntraindications
lema, danger of cardiac decompensation; story or symptoms of peptic ulcer; renal, patic or cardiac damage; history of drug ergy; history of blood dyscrasia. The drug ould not be given when the patient is se- e, or when other potent drugs are given ncurrently. Large doses are contraindi- ted in patients with glaucoma.

ecautions
otain a detailed history and a complete ysical and laboratory examination, includ- ing a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Make regular blood counts. Use greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy.

Adverse Reactions
The most common are nausea, edema and drug rash. Hemodilution may cause moderate fall in red cell count. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Dosage
The initial daily dosage in adults is 300-600 mg. daily in divided doses. In most instances, 400 mg. daily is sufficient. When improvement occurs, dosage should be decreased to the minimum effective level: this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

Also available: Butazolidin®,
brand of phenylbutazone
Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York BU-3804 P

Geigy

HAWAII MEDICAL JOURNAL

Published Bi-Monthly by the HAWAII MEDICAL ASSOCIATION (Incorporated in 1856 under the Monarchy), 510 S. Beretania St., Honolulu, Hawaii 96813 • *Editor,* HARRY L. ARNOLD, JR., M.D. • *News Editor,* HENRY N. YOKOYAMA, M.D. • *Managing Editor,* LEE MCCASLIN

VOLUME 25, NUMBER 6 • JULY-AUGUST, 1966 • $6.00 A YEAR, $1.00 A COPY

The JOURNAL may not be held responsible for opinions expressed in papers, discussions, communications, or advertisements. The advertising policy of the HAWAII MEDICAL JOURNAL is governed by the rules of the Council on Drugs of the American Medical Association. The right is reserved to reject material submitted for editorial or advertising columns. All material for publication must be in the hands of the editor on or before the 10th day of the month preceding publication date. Reprints of original articles will be supplied at actual cost, provided request is attached to manuscript or made in sufficient time before publication. A reasonable number of cuts and illustrations accompanying an article will be accepted for printing. The right is reserved to ask the author to bear cost of these when it is found necessary to do so.

Copyright, 1966, by the Hawaii Medical Association, Honolulu, Hawaii. Entered as second class matter, October 17, 1941, at the Post Office in Honolulu, Hawaii, under the Act of August 24, 1912. Office of Publication: Mabel L. Smyth Memorial Building, 510 S. Beretania St., Honolulu, Hawaii 96813.

The Hawaii Medical Association

Officers 1966-1967

President • THEODORE T. TOMITA, *Honolulu*
President-Elect • B. A. RICHARDSON, *Honolulu*
Past President • O. D. PINKERTON, *Honolulu*
Secretary • R. VARIAN SLOAN, *Honolulu*
Treasurer • HERBERT Y. H. CHINN, *Honolulu*

County Presidents

Hawaii County • ED B. HELMS, *Hilo*
Honolulu County • JOHN J. LOWREY, *Honolulu*
Kauai County • Y. MIYASHIRO, *Waimea*
Maui County • KENNETH HALING, *Kahului*

Delegate to A.M.A. • RICHARD D. MOORE, *Honolulu*
Alt. Delegate to A.M.A. • GEORGE H. MILLS, *Honolulu*

Councillors 1966-1967

Maui • JOSEPH E. ANDREWS
Honolulu • GROVER H. BATTEN
Honolulu • BERNARD W. D. FONG
Honolulu • ANDREW C. IVY, JR.
Hawaii • ROBERT M. MIYAMOTO
Kauai • SAMUEL R. WALLIS

Officers—County Societies—1966

HAWAII		HONOLULU
ED B. HELMS •	President	• JOHN J. LOWREY
ETTA WRIGHT BEST •	Vice President	• GEORGE H. MILLS
CHARLES H. BELCHER •	Secretary	• KEITH F. O. KUHLMAN
PAUL CALDWELL •	Treasurer	• HERBERT Y. H. CHINN

KAUAI		MAUI
Y. MIYASHIRO •	President	• KENNETH HALING
SAMUEL WALLIS •	Vice President	• BILLIE FERN STROTHER
JAMES P. WARNER •	{Secretary} {Treasurer}	• SAKAE UEHARA

SUFFERING FROM POCKETBOOK ANEMIA?

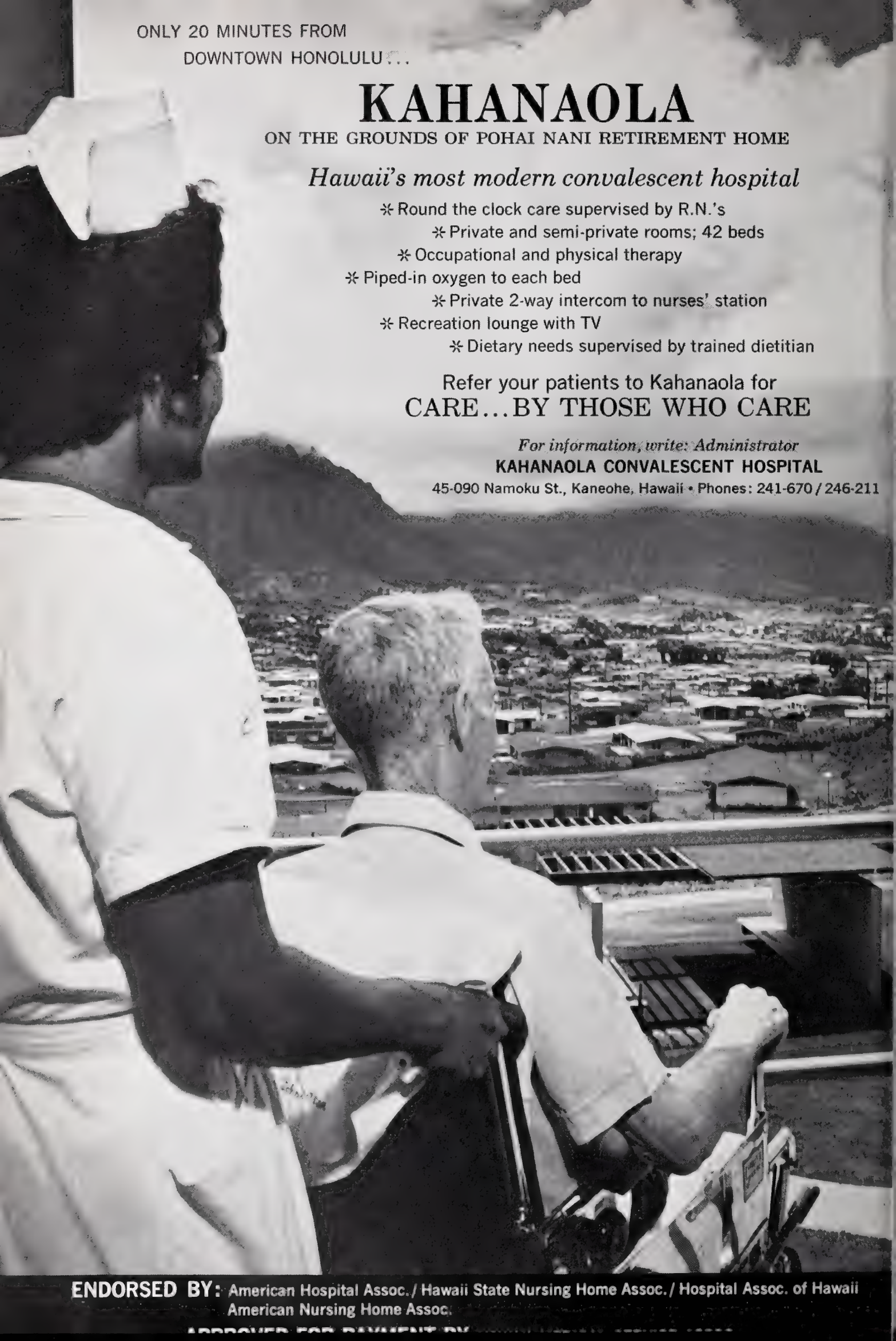


A Strong Dose Of "Tax Shelter" May Be The Cure!

If you're concerned about keeping more of your earned income you'll be wise to look into tax shelter. Let Shirley Olds, Realtors provide the medicine to cure your pocketbook anemia.

They're specialists in tax shelter.

Shirley Olds, Inc.
REALTORS
708 Ward Avenue / Phone 506-578



ONLY 20 MINUTES FROM
DOWNTOWN HONOLULU...

KAHANAOLA

ON THE GROUNDS OF POHAI NANI RETIREMENT HOME

Hawaii's most modern convalescent hospital

- ✲ Round the clock care supervised by R.N.'s
- ✲ Private and semi-private rooms; 42 beds
- ✲ Occupational and physical therapy
- ✲ Piped-in oxygen to each bed
- ✲ Private 2-way intercom to nurses' station
- ✲ Recreation lounge with TV
- ✲ Dietary needs supervised by trained dietitian

Refer your patients to Kahanaola for
CARE...BY THOSE WHO CARE

For information, write: Administrator
KAHANAOLA CONVALESCENT HOSPITAL
45-090 Namoku St., Kaneohe, Hawaii • Phones: 241-670 / 246-211

ENDORSED BY: American Hospital Assoc. / Hawaii State Nursing Home Assoc. / Hospital Assoc. of Hawaii
American Nursing Home Assoc.

APPROVED FOR PAYMENT BY



Read now... save on taxes later!

If you are concerned about your family's financial future — how best to conserve money you are making now for their future use — you should read "Taxes and the Professional Man."

Written especially for professional men, it explains important aspects of Federal estate and gift taxes. How they may be minimized by sound planning. How trusts may serve your purposes. How the professional man who works for a corporation or institution should plan. Examples are included.

For a copy of "Taxes and the Professional Man," just write or call:

60 ANNIVERSARY 1906 1966

BISHOP TRUST COMPANY

Trust Services Exclusively

BISHOP AND KING STREETS · PHONE 563-771 ■

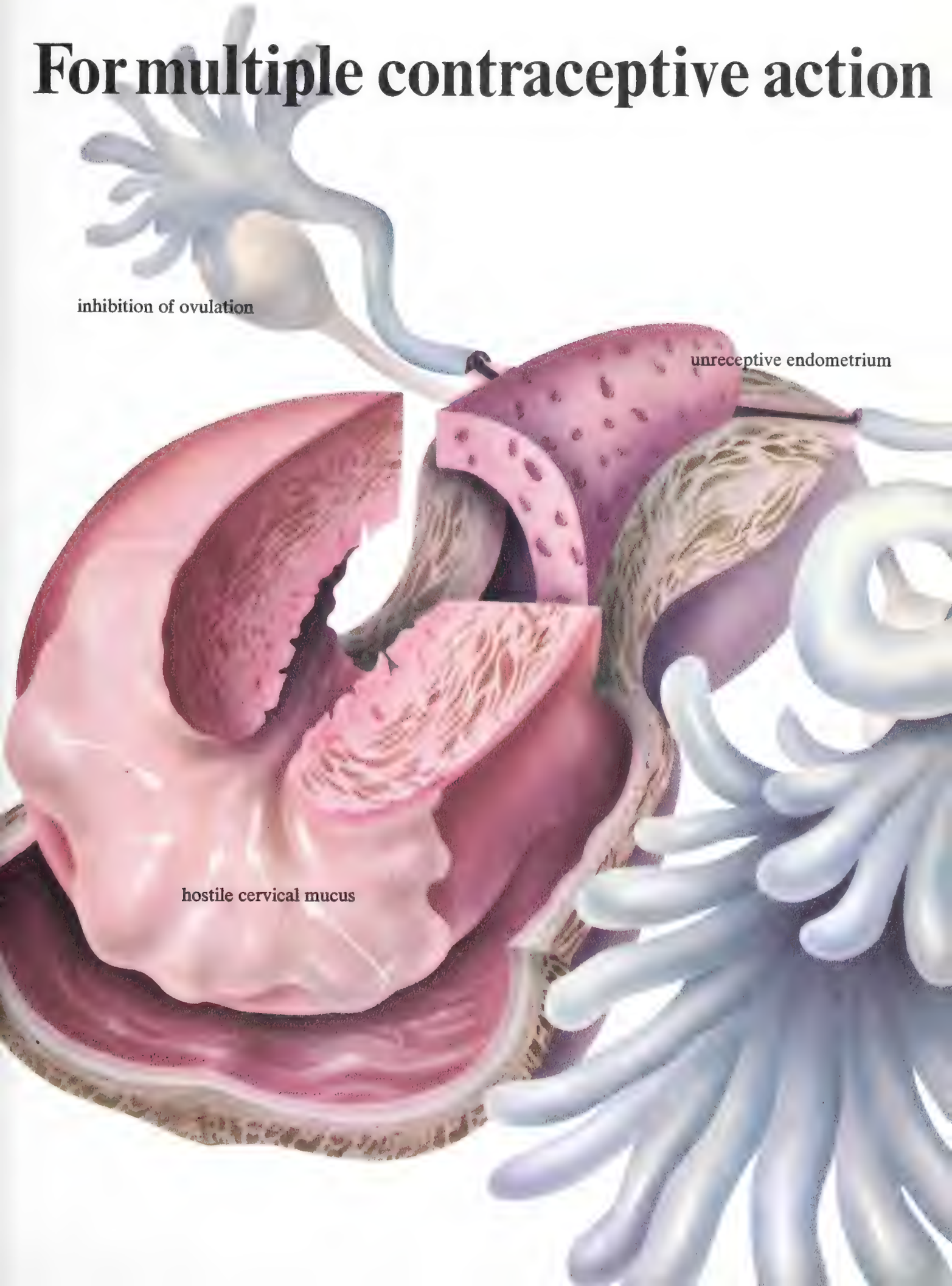
LIBRIUM®
(chlordiazepoxide HCl)

ROCHE

WHEN ANXIETY IS A SIGNIFICANT COMPONENT OF THE CLINICAL PROFILE

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d.
Side Effects: Side effects, usually dose-related, include drowsiness, ataxia, minor skin rashes, edema, menstrual irregularities, nausea and constipation. When treatment is protracted, blood counts and liver function tests are advisable. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined.
Precautions: Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, in long-term treatment and in presence of depression or suicidal tendencies. Exercise caution in administering drug to addiction-prone patients or those who might increase dosage; withdrawal symptoms, similar to those seen with barbiturates or meprobamate, can occur upon abrupt cessation after prolonged overdosage. Caution should be exercised in prescribing any therapeutic agent for pregnant patients.
Supplied: Capsules, 5 mg, 10 mg and 25 mg, bottles of 50.
Roche Laboratories • Division of Hoffmann-La Roche Inc • Nutley, N.J. 07110

For multiple contraceptive action



Norinyl® tablets

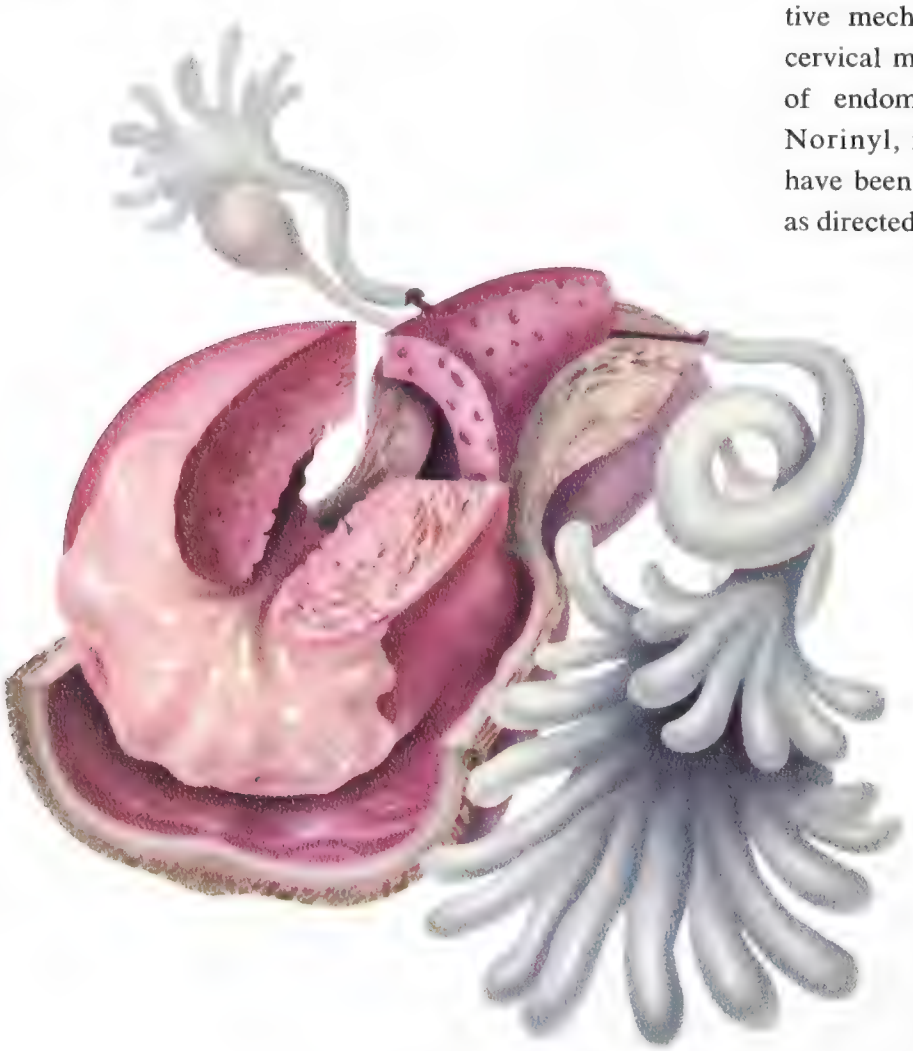
(norethindrone 2 mg. c mestranol 0.1 mg.)

multiple action that has produced a record of unexcelled effectiveness

inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation



no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.

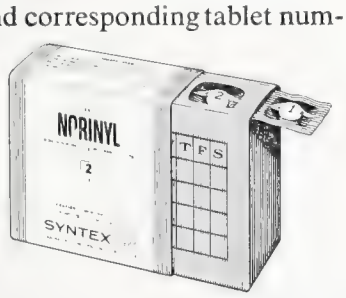
plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects

Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage

An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.



Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:153 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

norethindrone—an original steroid from

SYNTEX

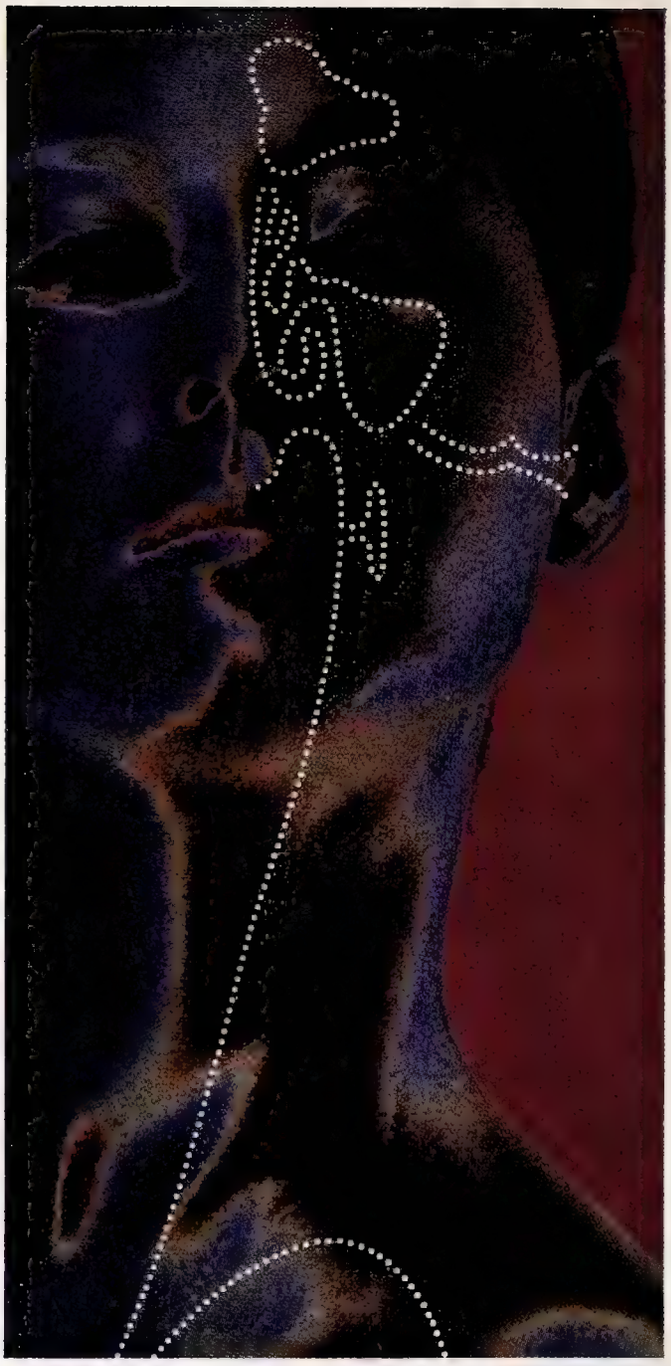
LABORATORIES INC., PALO ALTO, CALIF.

Norinyl® tablets

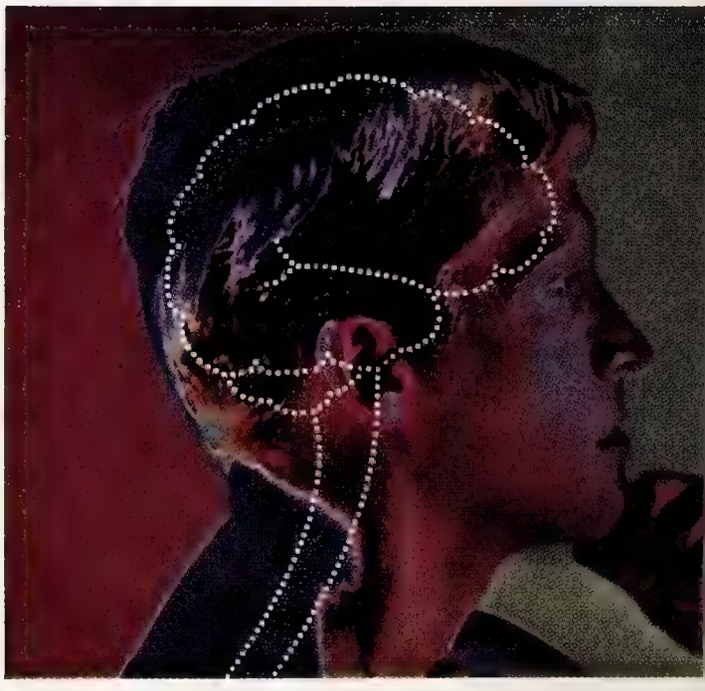
(norethindrone 2 mg. c mestranol 0.1 mg.)

for multiple contraceptive action

BASIC BACTERICIDAL ANTIBIOTIC THERAPY IN INFECTIONS THROUGHOUT THE BODY







THE PENICILLIN YOU USE LIKE A BROAD-SPECTRUM ANTIBIOTIC

Instead of tetracycline or chloramphenicol—instead of erythromycin or triacetyloleandomycin—you can now treat bacterial infections with the first broad-spectrum penicillin—Polycillin (ampicillin trihydrate). Unlike these other agents, it is *bactericidal* (not merely bacteriostatic), exceptionally well tolerated and nontoxic. Now available in a form to suit any need—for children or adults—it is an ideal first choice whenever broad-spectrum therapy is called for.

Basic in Respiratory Infections

Polycillin (ampicillin trihydrate) is effective against the most common respiratory pathogens—*D. pneumoniae,* streptococci, and sensitive staphylococci; against *H. influenzae* it is unexcelled. In more than 300 respiratory cases, cured or improved responses were noted in 97%.[1] (Note, however, that ampicillin is not indicated in *resistant* staphylococcal infections.)

An Innovation in G.U. Infections

Polycillin (ampicillin trihydrate), with its extended spectrum, is effective where penicillins were rarely effective before—*throughout* the urinary tract. It was "...the most effective drug tested against *E. coli* and *P. mirabilis.*"[2] In over 300 evaluated G.U. infections, it elicited favorable clinical response in 96.5% of 115 cases of gonorrheal urethritis and 85.1% of other urinary-tract infections.[1]

A New Approach to Meningitis

In the treatment of bacterial meningitis, the clinical success with Polycillin-N (sodium ampicillin) for Injection in 192 patients (compared with 261 patients treated with chloramphenicol and/or penicillin G) was so uniformly excellent against each of the meningeal pathogens (pneumococci, meningococci and *H. influenzae)* and so well tolerated and free of toxicity—that the investigators concluded: "...the advantages of a single drug and the absence of significant toxicity suggest that this agent be considered the drug of choice for the initial treatment of bacterial meningitis...."[3]

New Strengths for More Severe Infections: 500-mg. Capsules; and, for Oral Suspension, new 250 mg./5 ml. in 80-ml. bottles.

New Size for Greater Economy: 150 ml. for Oral Suspension—125 mg./5 ml.

Also Available: 250-mg. Capsules; and, for Oral Suspension, 125 mg./5 ml. strength in 60- and 80-ml. bottles. For I.M. and I.V. use: Polycillin-N™ (sodium ampicillin) for Injection, 250 and 500 mg

References: 1. Published reports and data on file at Bristol Laboratories. 2. Anderson, K.N., *et al.:* JAMA *187*:555 (Feb. 22) 1964. 3. Mathies, A.W., Jr., *et al.:* Synopsis of experience with ampicillin in bacterial meningitis. Presented at 4th Internat. Cong. Chemother., Washington, D. C., Oct. 18-21, 1965.

BRISTOL THERAPEUTIC SUMMARY: For complete information, consult Official Package Circular.

Indications: Infections due to susceptible strains of Gram-negative bacteria (including Shigellae, *S. typhosa* and other Salmonellae, *E. coli, H. influenzae, P. mirabilis, N. gonorrhoeae* and *N. meningitidis)* and Gram-positive bacteria (including streptococci, pneumococci and nonpenicillinase-producing staphylococci).

Contraindications: A history of serious allergic reactions to penicillin and infections due to penicillinase-producing organisms.

Precautions: Typical penicillin-allergic reactions may occur, especially in hypersensitive patients. Mycotic or bacterial superinfection may occur. Experience in newborn and premature infants is limited and caution should be used in treatment with frequent organ function evaluations. Safety for use in pregnancy is not established. In gonorrheal therapy, serologic tests for syphilis should be performed initially and monthly for 3 months. Assess renal, hepatic and hematopoietic function intermittently during long-term therapy.

Adverse Reactions: Skin rash, pruritus, urticaria, nausea, vomiting, diarrhea and anaphylactic reactions. Mild transient elevations of SGOT or SGPT have been noted.

Usual Dosage: Adults—250 or 500 mg. *q.* 6 *h.* (according to infection site and offending organisms). Children—50-100 mg./Kg./day in 3 to 4 divided doses (depending on infection site and offending organisms). Children weighing more than 20 Kg. should be given an adult dose. Beta-hemolytic streptococcal infections should be treated for at least 10 days.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York

A dosage form for every patient

Polycillin®
(ampicillin trihydrate)
CAPSULES

Polycillin®
(ampicillin trihydrate)
FOR ORAL SUSPENSION

Polycillin-N™
(sodium ampicillin)
FOR INJECTION – I.M./I.V.

THREE TIMES A YEAR

Your patients without a plan to economically protect them when they are in need of medical assistance may join Hawaii's own community service medical plan on an individual basis three times a year.

Membership is open to qualified individuals of all ages in

MARCH — JULY — *and* — NOVEMBER

HMSA is a non-profit, community service organization. As such it is able to provide tremendous benefits for reasonably low dues.

HMSA is the medical plan which gives you free choice of doctors and hospitals — an extremely desirable feature.

Member of Western Conference of Prepaid Medical Service Plans



® BLUE SHIELD PLAN FOR HAWAII

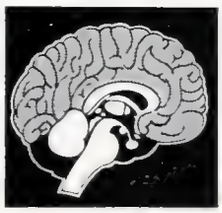
HAWAII MEDICAL SERVICE ASSOCIATION

For More than 28 Years — Hawaii's Own / Hawaii Owned

Behind continued high blood pressure readings lies the possibility of organic damage[1-13]

MANY OF THE aspects of essential hypertension are unpredictable—either because there are a number of mechanisms involved or because individuals differ in their responses to these mechanisms.[1]

There is one aspect of hypertension, however, that seems, in many cases, predictable. ". . . when the blood pressure is elevated to a marked degree for an adequate period of time, this in itself leads to perpetuation of the syndrome with resulting vascular damage throughout the body."[14] All too often the disease progresses until there is damage to one of three vital organs: the heart, the kidney, the brain.


"Hypertension is certainly a major factor in the genesis of coronary heart disease, and it is even more important when compounded with obesity."[4]

"[Vascular deterioration] can be clearly seen in the kidney with a degree of damage that can be measured by renal function studies."[10]

". . . most evidence suggests that reduction of blood pressure, when it is too high, not only relieves the heart of excess work but reduces vascular damage."[1]

"In short, treatment is indicated."[1]

Antihypertensive therapy will not restore the blood vessels to normal. Yet many of the vascular changes and symptoms caused by increased blood pressure may be arrested or alleviated when the blood pressure is reduced to normotensive levels.[7]

Reducing the blood pressure helps curtail further vascular damage and improves the prognosis — when damage is not too far advanced before therapy is started.[14] Essential hypertension is an indication not only for treatment, but for *early* and adequate treatment of the patient in question.

Reduce the blood pressure with Rautrax-N

Rautrax-N combines the antihypertensive-tranquilizing action of whole root rauwolfia with the antihypertensive-diuretic action of bendroflumethiazide in one convenient medication. The two drugs complement each other so that smaller doses of both are possible.

Rauwolfia combined with bendroflumethiazide is particularly effective in long-term therapy,[15-17] since beneficial effects do not diminish with continuous daily administration.

For most patients 1 or 2 Rautrax-N tablets daily are sufficient for maintenance therapy. The simplicity, convenience and economy of such a dosage schedule are of particular benefit to older patients.

References: 1. Page, I. H., and Dustan, H. P.: The Usefulness of Drugs in the Treatment of Hypertension, in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 95. **2.** Hollander, W.: The Evaluation of Antihypertensive Therapy of Essential Hypertension in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 97. **3.** Nickerson, M.: Antihypertensive Agents and the Drug Therapy of Hypertension, in Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 3, New York, The Macmillan Co., 1965, p. 727. **4.** Berkson, D. M.: Indust. Med. & Surg. **32**:371, 1963. **5.** Cohen, B. M.: M. Times **91**:645, 1963. **6.** Lee, R. E., et al.: Am. J. Cardiol. **11**:738, 1963. **7.** Moyer, J. H.: Am. J. Cardiol. **9**:821, 1962. **8.** Moser, M.: New York J. Med. **62**:1177, 1962. **9.** Wood, J. E., and Battey, L. L.: Am. J. Cardiol. **9**:675, 1962. **10.** Moyer, J. H., and Heider, C.: Am. J. Cardiol. **9**:920, 1962. **11.** Moser, M., and Macaulay, A. I.: New York State J. Med. **60**:2679, 1960. **12.** Judson, W. E.: Nebraska M. J. **44**:305, 1959. **13.** Hodge, J. V.; McQueen, E. G., and Smirk, H.: Brit. M. J. **1**:5218, 1961. **14.** Moyer, J. H., and Brest, A. N.: Hypertension Recent Advances, Philadelphia, Lea & Febiger, 1961, p. 633. **15.** Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. **10**:516, 1962. **16.** Reid, W. J.: J. Am. Geriatrics Soc. **13**:365, 1965. **17.** Feldman, L. H.: North Carolina M. J. **23**:248, 1962.

Contraindications: Severe renal impairment or previous hypersensitivity. **Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting or G.I. bleeding occur.

Precautions and Side Effects: The dose of ganglionic blocking agents, veratrum or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Caution is indicated in patients with depression, suicidal tendencies, peptic ulcer; electrolyte disturbances are possible in cirrhotic or digitalized patients. Marked hypotension during surgery is possible; consider discontinuing two weeks prior to elective surgery and observe patients closely during emergency surgery. Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression, diarrhea, weight gain, edema, drowsiness may occur. Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients, and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, rashes may occur.

Dosage and Supply: Initial dosage, 1 to 4 tablets daily, preferably at mealtime. Maintenance, 1 or 2 tablets daily. Rautrax-N is supplied as capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin®), 4 mg. bendroflumethiazide (Naturetin®), 400 mg. potassium chloride.

Also available: Rautrax-N Modified — capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin), 2 mg. bendroflumethiazide (Naturetin), 400 mg. potassium chloride. Both potencies available in bottles of 100. For full information, see Product Brief.

RAUTRAX®-N

Squibb Rauwolfia Serpentina Whole Root (50 mg.) with Bendroflumethiazide (4 mg.) and Potassium Chloride (400 mg.)

SQUIBB

'The Priceless Ingredient' of every product is the honor and integrity of its maker.



And now.

for all you cold sufferers who've been looking for a cure-all.

They can't cure a cold. We can't cure a cold. You can't cure a cold. But what you can do is relieve the symptoms, making the patient comfortable and the cold bearable.

The patient suffering from head cold congestion, for instance, should breathe easier when you prescribe Novahistine LP.

Novahistine LP is a long-acting decongestant that helps restore normal mucus secretion and ciliary activity—physiologic mechanisms which prevent infection of the respiratory tract. Two tablets in the morning and two in the evening will provide around-the-clock relief by helping to keep congested air passages clear, thus enabling your cold patient to enjoy normal and free breathing.

Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Tell patients who operate machinery or motor vehicles that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

PITMAN-MOORE
Division of The Dow Chemical Company, Indianapolis, U.S.A.

DOW

NOVAHISTINE® LP

For relief of nasal congestion.



INVENTORY + DELIVERY = SERVICE

Our job is to have what you want . . . when you want it . . . and deliver it fast. Every time. Without fail. We are doing everything possible to honor your trust with service so dependable it can be taken for granted.


Charles Malang
MANAGER


Johnny Kawafuchi
Sales Manager


Kenny Hills
Salesman—Oahu


Frankie Fernandez
Salesman—Oahu


Hideo Kawabata
Salesman—Oahu


Bill Lindsey
Salesman—Oahu


Masaaki Sasaki
General Sales
—Hawaii


Yoriyoshi Hara
Salesman—Hawaii


Christine Oga
Inside Sales
—Oahu


Edna Sato
Inside Sales
—Oahu


Doris Uyeda
Inside Sales
—Oahu


Elizabeth Azevedo
Inside Sales
—Oahu


George Pereira
Buyer


Eileen Brenessel
Secretary


Charlie Freitas
Warehouseman


Donald Hangai
Warehouseman


Hans Yoshino
Warehouseman


Shiro Sodetani
Warehouseman

Applicators / Desenex / Drug Envelopes / Ether / Lysol / Mazon / Ointment Tins

Arbrook
Ames Co., Inc.
Alcon Laboratories
Allergan Pharmaceutical
Astra Pharm. Products, Inc.
Ayerst Laboratories, Inc.
Bard-Parker
Barnes-Hind Laboratories
Becton-Dickinson & Company
Beutlich, Inc.
Bristol Laboratories
Brockway Glass Company
Burroughs Wellcome & Co.
Ciba Pharmaceutical Prod., Inc.
Dalton, Edward
Davis & Geck Sutures
Drug Package Inc.
Eastman Kodak
Eaton Laboratories
Endo Laboratories
Ethicon Inc.
Fellows-Testagar
Hynson, Westcott, Dunning
Invenex Pharmaceuticals
Johnson & Johnson
Kirkman Pharmacal Company
Lederle Laboratories
Mallinckrodt
McNeil Laboratories
Mead-Johnson & Company
Merrell, William S.
Milex Products
Minnesota Mining & Mfg.
Obergfel
Organon, Inc.
Ortho Pharmaceutical Corp.
Pacific Paper Products
Pfizer Laboratories
Pitman-Moore
Ray-O-Vac Company
Riker Laboratories, Inc.
A. H. Robins Co., Inc.
Roche Laboratories
J. B. Roerig & Company
Sauter Laboratories
Schering Corp.
The Scholl Mfg. Co., Inc.
Searle & Co., G. D.
Smith, Kline & French Lab.
Stanlabs, Inc.
Strong Cobb Arner
Tampax Inc.
Tidi Products
Travenol—Hilo
Vestal Laboratories, Inc.
Wallace Laboratories
Warner-Chilcott Lab.
Warren-Teed Pharmaceuticals
Westwood Pharmaceuticals
Winthrop Products, Inc.

Osyl / Rx Bottles / Rx Files / Pill Boxes / Tongue Blades / X-Ray Films & Supplies

SAME-DAY DELIVERIES SCHEDULED RURAL DELIVERIES

Phone 585-531 between 7:30 a.m. and 4:30 p.m. weekdays.

AMFAC INC DRUG DEPARTMENT



The Pain Is Gone

Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

in diarrhea

LOMOTIL®

Tablets
Liquid

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride 2.5 mg.
(Warning: May be habit forming)
atropine sulfate 0.025 mg.



is a corker

Effectiveness: Lomotil possesses a unique degree of effectiveness in both acute and chronic diarrhea.

Convenience: Lomotil is supplied as small, easily carried, easily swallowed tablets and as a pleasant, fruit-flavored liquid.

Versatility: The therapeutic efficiency, safety and convenience of Lomotil may be used to advantage alone or as adjunctive therapy in diarrhea associated with:

- **Ulcerative colitis**
- **Acute infections**
- **Irritable bowel**
- **Regional enteritis**
- **Drug therapy**
- **Food Poisoning**
- **Functional hypermotility**
- **Malabsorption syndrome**
- **Ileostomy**
- **Gastroenteritis and colitis**

Dosage: For full therapeutic effect—Rx full therapeutic dosage. The recommended initial daily dosages, given in divided doses, until diarrhea is controlled, are:

Children: 3 to 6 months — 3 mg. (½ tsp.* t.i.d.)
6 to 12 months — 4 mg. (½ tsp. q.i.d.)
1 to 2 years — 5 mg. (½ tsp. 5 times daily)
2 to 5 years — 6 mg. (1 tsp. t.i.d.)
5 to 8 years — 8 mg. (1 tsp. q.i.d.)
8 to 12 years —10 mg. (1 tsp. 5 times daily)

Adults: 20 mg. (2 tsp. 5 times daily or 2 tablets 4 times daily)

*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the therapeutic dose.

Precautions: Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is a Federally exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. The subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

SEARLE *Research in the Service of Medicine*

Carnation
EVAPORATED MILK



1965
Carnation Healthy Baby Contest
$1,000 1st prize winner,
Laurie Anne Medeiros
of Honolulu, Hawaii

HAWAII'S HEALTHY BABY MILK...

1st CHOICE FOR INFANT FEEDING...
No. 1 in the Islands for generations,
...available everywhere in Hawaii

"from Contented Cows"



ECONOMY

When you prescribe or recommend Allbee with C, you can be sure your patient is getting a rational, specific multivitamin formulation at an economical price. The potent formula is sensible and simple. It contains therapeutic amounts of the water-soluble B and C vitamins. These vitamins are expended rapidly in the body and need to be replenished frequently. There are no extraneous factors, no frills in Allbee with C. It's the no-nonsense vitamin in the yellow and green capsule that always gives your patient his money's worth.

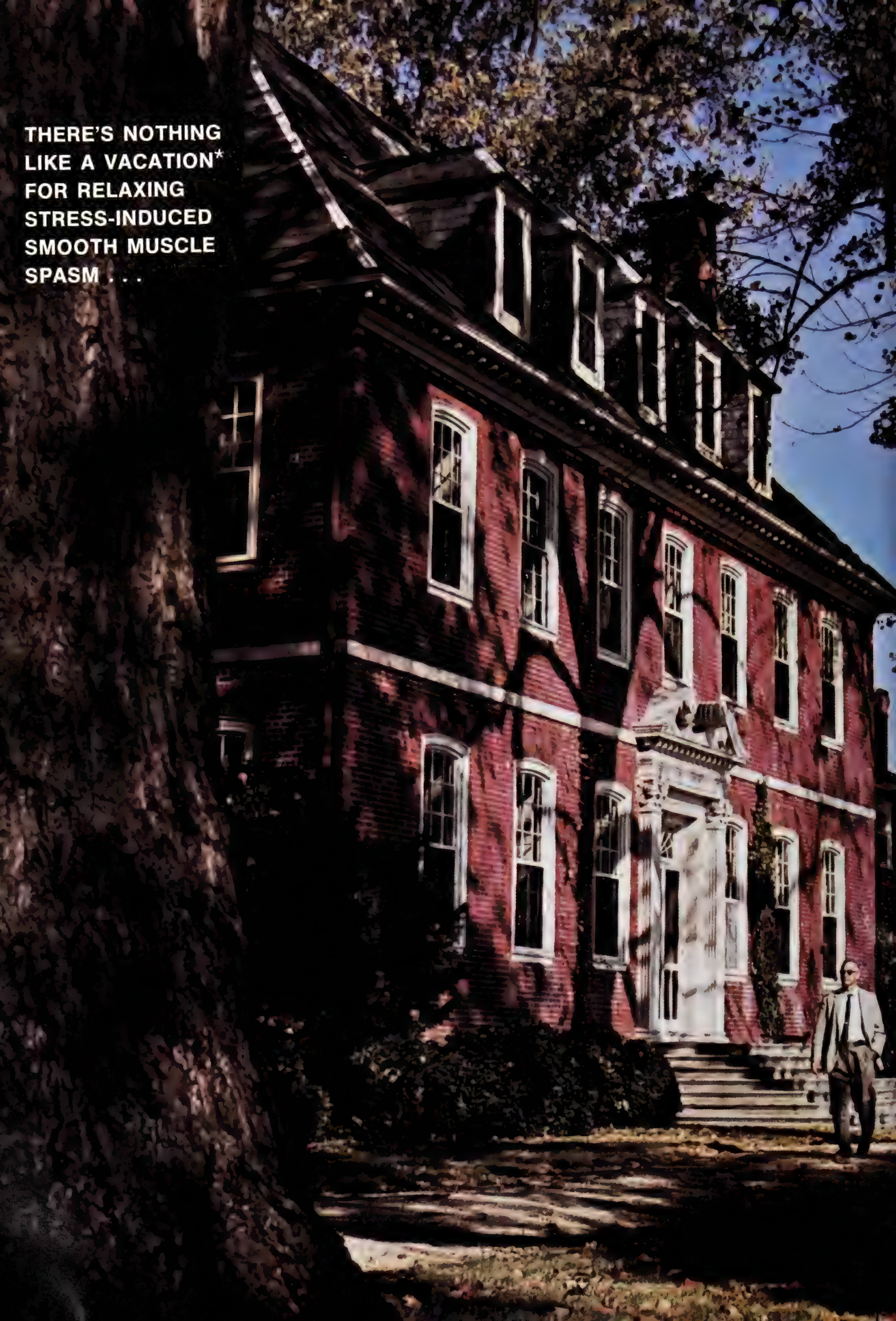
Each capsule contains: Thiamine mononitrate (B_1), 15 mg.; Riboflavin (B_2), 10 mg.; Pyridoxine hydrochloride (B_6), 5 mg.; Nicotinamide, 50 mg.; Calcium pantothenate, 10 mg.; Ascorbic acid (vitamin C), 300 mg.

A. H. ROBINS COMPANY, INC.,
RICHMOND, VIRGINIA 23220

A·H·ROBINS

—a good reason for

ALLBEE® WITH C


THERE'S NOTHING
LIKE A VACATION*
FOR RELAXING
STRESS-INDUCED
SMOOTH MUSCLE
SPASM . . .

. . NOTHING, THAT IS,
EXCEPT THE SEDATIVE-ANTISPASMODIC
BENEFITS OF

DONNATAL®

There's nothing quite like a vacation to ease the pressures of the modern, "workingday" world. And for the patient who can't get away from it all, there's nothing quite like Donnatal to relax stress-induced smooth muscle spasm. For 31 years it has been the antispasmodic-sedative most often prescribed for relieving functional disturbances of tone and motility of the gastrointestinal tract.

belladonna alkaloids in optimally balanced ratio

In Donnatal, natural belladonna alkaloids are rationally balanced in a specific, fixed ratio that provides "the greatest efficacy with the smallest possible dose."[1] They avoid the clinical uncertainties of the variable tincture and extract of belladonna, and are considered superior in range of action to atropine alone.[2] Furthermore, they are generally recognized as being more effective than the synthetics for relieving visceral spasm.

phenobarbital for sedation

Years of clinical use have established phenobarbital as one of the most efficient and highly regarded sedatives. In fact, for general sedation it is the drug of choice.[3] In Donnatal, phenobarbital potentiates the spasmolytic effects of the belladonna alkaloids, lessening emotional tensions and checking the neurogenic impulses that trigger GI disorders.

more than 24 indications in PDR

Donnatal has withstood the test of time to become the classic sedative-antispasmodic because of its unsurpassed effectiveness, safety, economy, uniformity of composition, and dosage convenience. Its widespread acceptance and usage by the profession can also be attributed to its versatility in treating disorders characterized by smooth muscle spasm. There are more than two dozen distinct and separate indications for Donnatal listed in the current PDR.

IN EACH TABLET, CAPSULE, OR (5 cc.) OF ELIXIR

hyoscyamine sulfate	0.1037 mg.
atropine sulfate	0.0194 mg.
hyoscine hydrobromide	0.0065 mg.
phenobarbital	(1/4 gr.) 16.2 mg.

(warning: may be habit forming)

IN EACH EXTENTAB

hyoscyamine sulfate	0.3111 mg.
atropine sulfate	0.0582 mg.
hyoscine hydrobromide	0.0195 mg.
phenobarbital	(3/4 gr.) 48.6 mg.

(warning: may be habit forming)

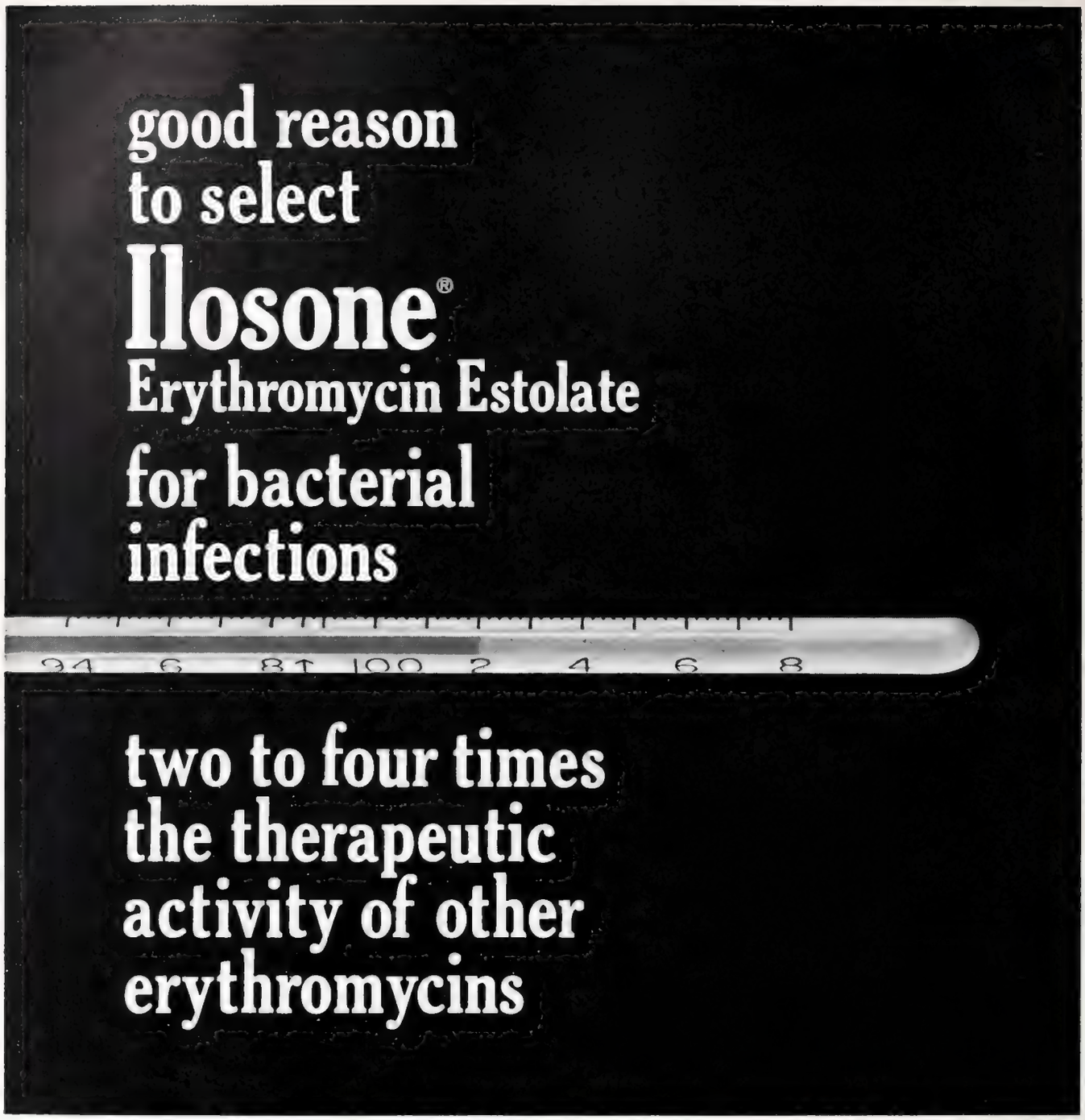
BRIEF SUMMARY: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma, or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease, or a hypersensitivity to any of the ingredients.

REFERENCES: 1. Vollmer, H.: Arch. Neurol. and Psychiat., 43:1057, 1940. 2. Morrissey, J.H.: J. Urology, 57:635, 1947. 3. Krantz, J.C., Jr., and Carr, C.J.: Pharmacological Principles of Medical Practice, 2nd ed., Baltimore (1954), 552.

*This one at Westover, elegant Colonial Virginia plantation, located on the James River near Richmond. Built in the early 1730's by William Byrd II, founder of Richmond, it is now the home of Mrs. Bruce Crane Fisher.

A. H. ROBINS COMPANY, INC., RICHMOND, VA.

A·H·ROBINS



CONTRAINDICATIONS: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

SIDE-EFFECTS: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

DOSAGE: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

600541

Presidential Address

O. D. PINKERTON, M.D., *Honolulu*

In these opening remarks of the Presidential Address on the occasion of the 110th Annual Meeting of the Hawaii Medical Association I should like to express my thanks and gratitude for the help and counsel I have received from many dedicated and devoted physicians of our Association.

The past year has been a year of great unity among us. For the first time in our history we have had unity of purpose and action.

It has also been a troubled year beset with problems known to all of us, and on which I shall not dwell.

RECENT LEGISLATION

The greatest catastrophe to medicine and to the people of this nation has been the enactment of P.L. 89-97, and, in some respects, the Heart Disease, Cancer and Stroke legislation, P.L. 89-239. They both have the capacity for great good or greater evil. The evil I refer to is the assumption by the Federal Government of powers that do not belong to it.

During a TV appearance in Texas at the time of signing the bill for extension of the deadline for signing up for Medicare benefits the President said that Medicare need not be just for people over 65; "that," he stated, "is where we started." In 1967 he is to ask Congress for a "Denticare" program for all children six years of age and under.

These two pieces of legislation are only portions of the "Great Society" program, which I believe, systematicallly undermines the ideals of personal obligation and true charity and the sense of responsibility of our citizens. The concept that one is no longer his brother's keeper is being fostered. This program legalizes the socialistic planning of the Federal Government, and confiscates the resources of our citizens to provide for the care of those people who can well afford to care for themselves. It is the natural result of a decaying society and an irresponsible Congress delegating unheard of powers to "wheeler dealer" individuals in high government positions. It is contributing to the demand and clamor for "bread and circuses" which has always preceded the fall of human responsibility and liberty, and the fall of great nations.

We hear constantly of the good that is being done; of the great advances in socio-economic conditions; of the great strides in the relief of suffering and want and deprivation. This is the cry of the socialist planners and some in high political positions. Yet one can almost routinely read articles, by jurists, law enforcement agents, teachers, and others, of the growing irresponsibility of our people and children; the disregard for law and order; the harassment of our law enforcing agencies; the crime increase; the juvenile problems and the apathy and downright refusal to support our country in time of conflict. More and more charity is demanded and more and more the people are told by the socialist planners that they are poverty stricken and need help, and the vicious circle continues.

Poverty is often a relative thing. A person may not be poor at all, unless he desires much. It is apparently the avowed purpose of the socialist planners to make everyone desire a lot so that they can *all* be declared to be poverty-stricken. And this vicious circle continues so that those in power can spend and elect and spend. This latter philosophy began in about 1933 and has been steadily gathering strength since that time. I believe it is leading to a sick citizenry. The various religious organizations have done little to stem the tide—in fact, many seem to be aiding and abetting this philosophy and supporting the leftward movement of government. Alas, some prominent people in church circles seem to be leading the movement leftward and abetting civil disobedience and assisting in the fomenting of civil unrest.

A liberal, socialist-inclined person is really backward and regressive because he preaches philosophies known well and adopted by many decadent and fallen nations. There is nothing new about them. According to Fulton Lewis III, a conservative is a progressive because he believes you move forward as a nation when you build people, not government. He believes that the flow of power should be moving in a progressive society, not in the direction of government but in the direction of people. With this I am in agreement.

At the November White House Conference on Health, Mr. Marion Folsom of Health, Education

and Welfare said "we must begin with the assumption that health is a basic human right." He stated that comprehensive, continuous and personal care should be available to all. He stated that in an abundant society we have the resources, capacity, and obligation to do this. This pretty well sums up the government's attitude, which I believe is being guided and directed by a government bureau, the Department of Health, Education and Welfare. It was from this bureau that so-called Medicare originated. It did not come from the law-making bodies of the land, but was promulgated by key people within that bureau. It did not come from the people until bureau and administration pressure, with the cooperation of the press, radio, and TV, saw to it that a so-called demand was created by the heads of senior citizen groups. Inadequate congressional hearings were held on the bill that became P.L. 89-97, and medicine was given only a few minutes to testify on it. It was said then that it is "now or never" at the time of its passage because the socialists had the votes and private health insurance was growing so rapidly that to have delayed its passage might have eliminated the possibility of this socialist legislation's ever passing.

THE FUTURE

It is my belief that we have one of the most powerful and liberal-dominated forces in the United States nestled comfortably in Washington at the elbow of the President, which unduly influences Congress, and which has in fact actually taken over the directing of legislation that is being ostensibly created by Congress, when in actuality some legislators merely serve as agents or vehicles whereby these legislative measures are brought up for consideration by Congress. This agency is the Department of Health, Education and Welfare, known as HEW. We know who the architect of Medicare was, and how many years of relentless effort it required. It was only necessary to wait for a rubber stamp Congress and proper timing. What other "goodies" does this person have up his sleeve, and how many others are working just as ardently and devotedly to create the complete socialist state?

It has been said that no sooner are we supplied with everything nature can demand, than we sit down to contrive artificial appetites.

What is cheerful and bright? The medical profession has tried and will continue its efforts to bring to the people of this State and Nation the very best medicine and surgery in the world. It attained this goal without Federal interference. Can it continue to do so under the inevitable interference that will come about under the yoke of this legislation?

I can attest that we are trying and will continue to make the greatest effort to live under this new regime. We shall endeavor to "contain the situation" and make positive and constructive changes where possible. The thousands of man hours put in by the members of every state medical society in the nation toward this goal is evidence of our good intentions and our desire to make the best of a disagreeable situation. It is fervently hoped that further socialist amendments to these two laws—Medicare, and Heart Disease, Cancer, and Stroke—will not put American medicine and the Federal Government on a collision course.

Another bright spot on a rather dismal horizon is the growth of the "Young Americans for Freedom," a conservatively oriented bipartisan group. The Young Republicans, a predominantly conservative group, had only 125,000 members three years ago and now numbers 600,000 members. Conversely, another partisan group, predominantly liberal and sometimes leftist, declined by more than 170,000.

THE UNIVERSITY

I should like now to discuss briefly the impact and importance of the University of Hawaii School of Medicine—its importance to the students, the faculty, the medical community, and the Pacific area.

Students will for the first time have an opportunity for more accessible facilities, and at less cost to them. Having completed their premedical and two years in medicine the University can assist them in obtaining admission to mainland facilities. If loan funds materialize, financial assistance will be available.

The faculty of the School of Medicine has the primary function of teaching students, but equal to this is the importance of research which most teachers look upon not as a responsibility, but as a privilege or opportunity. The yield from research should be valuable not only to Hawaii but to the Pacific area to the south and west. It is impossible to get top faculty material without research opportunities, and these are being provided.

The medical community should profit not only by its contributions to teaching, but in addition by the association with teachers and researchers. The number of faculty with full-time appointments in the clinical area will be quite small, because the major clinical teaching comes in the last two years. These few, however, may be of value to the medical and general community, in a consultative capacity. Every effort is being made at the University to select the few very carefully so that they

will not only be good teachers and researchers, but superb clinicians as well. Life for a medical man is incomplete unless he can keep his hand in clinical medicine. Consultative services will be available to the medical community. Informal consultation between practicing physicians and members of the basic science faculty, and research teams may be formed when a clinician and a basic scientist have an area of mutual interest.

To the medical community there will be the advantage of teaching and research. Teaching is enjoyed by many Honolulu physicians. Some of our members are already serving on medical school committees. I am informed by the University that in the course of time an able physician who wishes to teach or do research that cannot be done in his office will have the opportunity at the School of Medicine. It should be pointed out that what has been said about the School of Medicine applies to the other two components of the College of Health Sciences. I refer to the School of Nursing and School of Public Health. A number of community physicians have accepted teaching appointments and it is expected that within the next year many more will be added when the departments of pathology and medicine are organized.

The Pacific area will feel the impact of this program from the standpoint of teaching, research, and consultative services as well as the impact of the Heart Disease, Cancer, and Stroke program which plans to encompass American Samoa, the Trust Territories, and Guam, as well as Hawaii. Physicians will be going to these areas not only from the University, but from the medical community. The Medical School will doubtless add many useful people and programs to the growth of Hawaii as an international area.

Will it be a greater pleasure to practice in a medical school community? With the presence of medical investigators and teachers it has been observed that the practice of medicine gets added pleasures, because of the interplay between clinicians and research people. It is my belief that most things that will come from having a medical school in our community will be positive, progressive, and pleasurable.

OUR MEDICAL ASSOCIATION

Are we doing enough as a medical asociation? No one will deny we are extremely busy with our thirty-eight committees tending our medical matters as well as allied and related affairs appertaining to medicine. In my opinion we need better liaison and frequent conversations with the Department of Health and the University of Hawaii. Needless misunderstandings with the Department of Health have come up during the past year. Closer liaison would have apprised them of our position, and us of their situation and the impact of certain legislation which they are required to implement.

In last year's Presidential Address, Dr. Samuel Allison recommended a committee to study Planning and Research. One meeting was held to investigate this problem, but no definitive action has been taken. There are areas that need study, such as physician distribution and needs; the number of specialists in certain categories; and the need for or saturation of certain specialties. Do we need periodic relicensing? Would not the Research and Planning group be more successful as a permanent committee of our Association whose duties encompassed the above studies as well as serving as the liaison between the University and Department of Health?

It has been stimulating to see so many of the young men of the medical community take an interest in our Association. We need many more not only to serve on committees but to study the functions of their particular committee. It is not exclusively the job of the chairman to think and call meetings. It is the job of every member to study, think, and push new ideas toward the chairmen so that they can be fully explored.

Our Medical Association, which now numbers 739, must not feel that because of our size and distance from the mainland United States, we do not have an obligation to actively promulgate plans and ideas, and take our place among the other states in formulating AMA policy for the improvement of the health of the community and the nation. Our services and influence should be available in directing legislation that will keep a measure of freedom in the practice of medicine in this country — the only nation that has maintained freedom of practice with its resultant high standard of medical care.

Our Medical Association and the AMA must continue to move through this world with dignity and honor no matter what happens to us.

There is something durable and profound in the Biblical exhortation to love your enemies, bless them that curse you, do good to them that hate you, and pray for them that despitefully use you.

As Lincoln said, "Let us have faith that right makes might, and in that faith let us, to the end, dare to do our duty as we understand it."

In closing, my deepest thanks to all committee chairmen and members, the President-elect and officers, and our executive staff for completing what I hope and believe has been a constructive and fruitful year for the Association. ■

Rupture of an abdominal aneurysm needn't be fatal at all if it is not fatal immediately. Operate!

Ruptured Abdominal Aneurysm
Report of Four Cases

EDWARD K. LAU, M.D.,* and RICHARD K. S. PANG, M.D.,† *Honolulu*

• *Death from rupture of an aortic aneurysm may be very rapid, but if the patient can survive long enough to be brought to the operating room, resection and graft replacement may be curative. Of four cases reported here, two were successfully managed in this way.*

THE LITERATURE on the subject of ruptured abdominal aneurysm is quite limited, only a few authors having reported a significant number of cases. While operative mortality is high, averaging 50 per cent to 60 per cent or even higher without immediate surgery, the outcome of this condition is uniformly fatal. With rupture, the operative risk, coupled with the hazards of anesthesia, massive hemorrhage, and shock, is almost three times that of nonruptured cases. Successful resection of ruptured abdominal aneurysm has been reported.

The clinical picture of ruptured aorta is frequently not clear, as patients may not all present symptoms of shock with massive retroperitoneal bleeding. Frequently, valuable time has been lost in urologic evaluation because of back pain with radiation to the flank, groin, and thigh. Severe pain in the abdomen and back may be interpreted as perforated peptic ulcer, mesenteric thrombosis, pancreatitis, or renal colic, with resultant delay in emergency treatment. X-ray of the abdomen and blood analysis are often misleading, and do not reflect true values in patients in impending shock.

The diagnosis of ruptured abdominal aortic aneurysm is dependent upon suspecting retroperitoneal hemorrhage associated with a pulsatile, tender abdominal mass, with signs and symptoms of progressive blood loss. This report does not include aneurysms which have ruptured into a hollow viscus, as the clinical pictures involved are markedly different.

In the following four case reports, the presenting symptoms had previously been interpreted as acute gastroenteritis due to food poisoning, sciatic neuritis causing low back pain, and renal azotemia due to renal calculus.

CASE REPORTS

CASE 1:—A 61-year-old Filipino man was hospitalized October 21, 1962, for food poisoning. He developed sudden severe steady umbilical pain after eating tuna fish for supper. He felt nauseated and vomited his supper prior to admission.

Physical examination showed a well-developed, well-nourished man, in no distress. Blood pressure was 190/110, pulse 84, respirations 20. The abdomen was soft and flat, but tender to deep palpation over the umbilicus. A 7x8 cm pulsating mass was palpable directly over this area. Bowel sounds were active, and femoral pulses were strong bilaterally with no audible murmur. The chest roentgenogram showed a mild degree of cardiac enlargement with slight widening of the transverse diameter of the aorta. The lung fields were clear, otherwise the findings were essentially normal.

Electrocardiogram showed abnormal T-wave changes. X-rays of the abdomen made with the patient in recumbent, erect, and decubitus positions showed air-fluid levels in the small intestine, interpreted as an early manifestation of segmental obstruction. There was no evidence of free intraperitoneal air.

Laboratory findings showed a PCV of 44.5%, hemoglobin 14.5 gm, WBC 10,800 with 87% neutrophiles, 9 lymphocytes, and 4 monocytes;

* Chief of Surgery, St. Francis Hospital.
† Thoracic and Cardiovascular Surgeon, St. Francis Hospital; former resident of Baylor University School of Medicine, Houston, Texas.
Received for publication June 24, 1965.

serum amylase 164 units (normal 60-160 units); urinalysis, 3+ albumin, 100-124 RBC/HPF, specific gravity 1.019.

On the following morning, the patient suddenly experienced severe abdominal pain. He developed cold sweat, thready pulse, and a sudden drop in blood pressure to a point where it was unobtainable.

Cardiac resuscitation was initiated by extrathoracic percussion. Oxygen, intravenous fluids, and blood transfusion were started immediately. After nine units of blood were given rapidly, the blood pressure was stabilized around 100 systolic, and the patient taken to the operating room.

Laparotomy by a midline incision revealed a ruptured abdominal aneurysm, for which aortic resection with a bifurcation graft replacement was performed. His postoperative course was uneventful, and he was discharged after two weeks of hospitalization. Good peripheral pulses were noted at the time of discharge.

CASE 2:—A 64-year-old Japanese man was hospitalized on October 25, 1962. He gave a history of backache of two weeks' duration, progressively worse for the past 36 hours. He was seen by his private physician who made a diagnosis of sciatic neuritis, and treated him unsuccessfully with oral medication and local novocaine infiltration block to the lumbar area. Intermittent claudication had begun at about the same time as his back pain.

On physical examination, he did not appear to be acutely ill. His blood pressure was 160/90 and pulse 70. The abdomen was soft and not tender to palpation. A large, pulsating mass was palpable to the right of the umbilicus. Bowel sounds were active, and femoral pulses were palpable. Lateral films of the abdomen showed displacement of the abdominal aorta with calcification.

Laboratory findings showed a hemoglobin of 106%, hematocrit of 18.2 gm, with a WBC of 11,100; urinalysis showed 4+ sugar with albuminuria.

The patient was then admitted directly to the hospital. By the time he arrived, his back pains were more severe, and the abdominal mass was larger and tender to palpation.

At operation a ruptured abdominal aneurysm was encountered, with retroperitoneal extravasation of blood. In the process of dissection and isolation of the aorta below the left renal vein, massive bleeding occurred from the rupture site. The blood pressure immediately dropped to zero, with no pulse obtainable. After the aorta distal and proximal to the aneurysm was isolated, and cross-clamped, blood was pumped in rapidly, and after five units of blood were given, the blood pressure was maintained at 90-100 systolic. The inferior mesenteric artery was identified and ligated at its origin, the aneurysm was widely opened anteriorly through a longitudinal incision, and clots and thrombus were evacuated. The aneurysm was partially resected, leaving behind the posterior wall attached to the inferior vena cava. Because the common iliac vessels were moderately arteriosclerotic and partially occluded, bilateral incisions were made over the groin, isolating the common femoral artery and its branches.

An aortofemoral bypass procedure was performed, using a DeBakey woven dacron prosthesis. Ten units of blood were given during the entire procedure.

Postoperative course was uneventful, and the patient was discharged from the hospital on the twelfth postoperative day.

Comments: A high index of suspicion by the surgical resident and consultant surgeon, in cases 1 and 2, led to the accurate diagnosis of a ruptured aortic aneurysm, and the combined team efforts of the nurses in the operating room, plus the immediate availability of blood, and surgery performed expediently, led to the salvage of these two patients.

CASE 3:—A 72-year-old Chinese man was hospitalized June 1, 1961, for abdominal pains and anuria. He gave a history of having sudden severe colicky pains in his left kidney area the evening before admission, followed by nausea and extension of his pains to the left upper quadrant anteriorly, and inability to urinate. A Foley catheter was inserted into the bladder, but only a few centiliters of urine were obtained. The urine was described as highly colored, but not grossly bloody. Intravenous fluid was given, but when, after a few hours, no urine was noted in the retention bag, an emergency cystoscopy was performed. Neither of the ureteral orifices could be identified for insertion of a catheter for retrograde pyelogram studies. An intravenous pyelogram showed nonfunction of both kidneys. An emergency left nephrostomy was decided upon by the urologist. While the abdomen was being prepared, a large, pulsating abdominal mass was felt for the first time.

During the nephrostomy, when the upper pole of the left kidney was punctured with a hemostat for insertion of a catheter into the renal pelvis, the patient suddenly stopped breathing. With the absence of blood pressure and pulse, emergency left thoracotomy was performed, and cardiac massage initiated by the consultant surgeon. Further efforts to stimulate the heart by injection of epine-

phrine, calcium chloride, and other agents failed. The patient expired on the operating table, due to hemorrhagic shock secondary to massive bleeding from a ruptured abdominal aneurysm, dissecting and occluding the renal vessels.

Comments: Accurate and early diagnosis can markedly reduce the immediate and late mortality of cases in which ruptured aortic aneurysm simulates complications of renal shutdown. In the case reported here, valuable time was lost in urologic evaluation.

Case 4:—A 68-year-old Caucasian man was hospitalized on August 29, 1963, for resection of a ruptured abdominal aneurysm. He gave a history of having noticed a pulsating abdominal mass for seven to ten days. Associated with this, he complained of shortness of breath for about three weeks. The abdominal mass apparently remained the same size, but became tender approximately eighteen hours prior to admission. The patient was admitted directly to St. Francis Hospital for emergency surgery.

On admission, the patient's blood pressure was 144/112; the pulse was irregular but strong. Laboratory work-up preoperatively revealed a blood sugar of 170, BUN of 32, hemoglobin of 11.2, PCV of 35%, bleeding time of 4′20″, clotting time of 16′30″, prothrombin activity of 72%.

There was no abnormality of the lower extremities except for slight blotching and cyanosis of the skin. Blood was immediately typed and cross-matched and the patient was taken to the operating room for surgery. During the induction of general anesthesia, the anesthesiologist noted a sudden drop in blood pressure and pulse. As matched blood was not immediately available, glucose, plasma, and low titer blood was started, and meanwhile the abdomen was rapidly prepared. A long vertical midline abdominal incision was made and the aorta distal and proximal to the aneurysm was cross-clamped. Approximately 3,000 cc of blood were found in the abdominal cavity and retroperitoneal space.

At the time the patient developed cardiac arrest, and the left chest was immediately opened and cardiac massage initiated. The heart was noted to be flaccid and soft. Blood continued to be pumped in rapidly through both antecubital veins, and as the blood volume picked up, the heart was restarted. The patient's condition remained critical for the remainder of the resection and graft replacement procedure. A systolic pressure of approximately 140, falling from time to time to 100, required the use of pressor agents. Blood was repeated as needed to a total of 12 units. At the end of the procedure, while closing the chest and abdominal cavities, another episode of hypotension and cardiac arrest occurred, and the heart was again massaged. Injections of epinephrine, calcium chloride, and digitalis were given as supportive measures including cardiac defibrillation, but to no avail. The patient expired on the operating table.

Comments: Had blood been available and started early, profound hemorrhagic shock might have been averted.

SYMPTOMS AND DIAGNOSIS

Symptoms of ruptured aortic aneurysm are related to the direction in which the hematoma dissects and whether the retroperitoneal hematoma has broken into the free peritoneal cavity. Back pain results from pressure on the lumbar spine, and gastrointestinal symptoms arise from compression of the third portion of the duodenum or from the stretching of the bowel mesentery.

Neurologic findings have frequently been noted in patients with large retroperitoneal hematomas, extending behind the aorta and compressing the spinal nerve and vessels, thus giving rise to loss of deep tendon reflexes on one or both sides, or to the appearance of sciatic neuralgia, as interpreted in case 2 by the local physician.

With rupture into the free peritoneal cavity, the signs and symptoms of shock, with peritoneal irritation and abdominal distention, are usually obvious and surgical exploration is mandatory.

DeBakey[1] states that in spite of the risk of perforation under these circumstances, resection of the aneurysm should always be attempted, regardless of the apparent hopelessness of the situation.

Beall[2] reports complications of arteriovenous fistula from abdominal aneurysm perforating into the inferior vena cava, causing signs of cardiac failure with ascites.

Garrett[3] and Humphries[4] have reported aneurysm ruptured into a hollow viscus, presenting a clinical picture of hematemesis, melena, or massive upper gastrointestinal bleeding.

Rusche[5] reports ruptured abdominal aortic aneurysm simulating perinephric abscess or late complications of renal shutdown, as interpreted in case 3.

Beebe[6] reports three diagnostic tests which have been frequently helpful in arriving at an early diagnosis. These consist of ecchymosis in the lower extremities, loss of psoas shadows in abdominal roentgenogram, and loss of deep tendon reflexes in the lower extremities. In some thick-set or obese individuals, diagnosis may be difficult in that the aneurysm or hematoma may be neither visible

nor palpable, and a pulsating mass is frequently missed.

Lateral x-ray which profiles calcification and displacement of the aorta, as well as obliteration of the psoas shadow, is helpful in establishing diagnosis, as emphasized by Lipshutz.[7]

Perforated peptic ulcer, acute pancreatitis, acute mesenteric vascular occlusion, coronary occlusion with abdominal symptoms, and renal calculi must be excluded in differential diagnosis.

MANAGEMENT

Measures to combat hemorrhagic shock must be instituted promptly, and operation should not be delayed, even though shock has not been completely relieved. Rapid control of the proximal aorta and iliac vessels distally, before beginning any dissection of the aneurysm itself, has been the recommended procedure of attack. Should the aneurysm extend above the renal arteries, cross-clamping of the aorta above the diaphragm may be necessary. In high extravasation of blood, the left renal vein may be obscured and injured during the dissection.

Removal of the entire aneurysm is usually not necessary. The aneurysm is widely opened and clots evacuated, care being taken first to identify the inferior mesenteric artery, so that it can be ligated and divided at its point of origin. As much atheromatous material as possible should be peeled away, and a portion of the artery wall left intact, adherent to the inferior vena cava or vertebra.

In many instances, the common iliac vessels are so badly diseased that a bypass of these vessels is necessary. The common femoral artery may be used, but DeBakey's commercially available bifurcated woven dacron grafts have been our choice to reestablish continuity. This prosthesis is less porous than the knitted grafts, thereby causing less bleeding through the graft.

Creech,[8] in his discussion of surgical management of ruptured abdominal aortic aneurysm, emphasizes the importance of control of hemorrhage and resuscitation of the patient after occlusion of the aorta proximally and distally, by rapid replacement of blood before dissection. It is also important to minimize the length of time the aortic circulation is stopped, limiting the interruption of blood flow to less than an hour; this can be accomplished if the operation is done expediently.

Should the occlusion time be longer than one hour, there is a risk of thrombosis of the arteries distal to the clamps. To minimize this complication, systemic or regional heparinization is justifiable. The value of osmotic diuretics during resection of aneurysms of the abdominal aorta, to prevent the development of acute renal failure in the early postoperative period, is debatable. We have routinely used 50 gm of mannitol in 250 cc of 5% glucose in normal saline solution, infusing during the operation, and found this quite helpful in initiating diuresis, especially in patients with pre-existing renal disease.

SUMMARY

Four cases of ruptured abdominal aortic aneurysm are presented to illustrate the variability of its signs and symptoms and the successful resection of two cases.

Uneventful recovery following early recognition and operative resection with graft replacement supports our belief that this disease need not be considered necessarily a fatal condition, the high mortality being attributable to delay in early operative repair and rapid restoration of blood flow, coupled with a depleted total blood volume and its effects on the heart and kidney.

This limited experience suggests that if a person can survive the rupture of an abdominal aortic aneurysm long enough for definitive surgery, his chances of recovery are good. ■

1374 Nuuanu Ave.

REFERENCES

1. DeBakey, M. E.: Changing concepts in thoracic vascular surgery, J. Thorac. Cardiovas. Surg. 38:145-165 (Aug.) 1959.
2. Beall, A. C., Jr., Cooley, D. A., Morris, G. G., Jr., and DeBakey: Perforation of arteriosclerotic aneurysms into the inferior vena cava, Arch. Surg. 86:809-817 (May) 1963.
3. Garrett, H. E., Beall, A. C., Jr., Jordon, G. L., Jr., and DeBakey, M. E.: Surgical consideration of massive gastrointestinal tract hemorrhage caused by an aortoduodenal fistula, Amer. Jour. Surg. 106:6-12 (Jan.) 1963.
4. Humphries, A. W., Young, J., LeFevre, J., and DeWolfe, V. G.: Complications of abdominal aortic surgery, Arch. Surg. 86:43-50 (Jan.) 1963.
5. Rusche, C., and Bacon, R. S.: Ruptured abdominal aortic aneurysm simulating perinephritic abscess, Brit. Journal of Urology 34:504-515 (Dec.) 1935.
6. Beebe, R. T., Powers, S. R., Jr., and Ginouves, C.: The early diagnosis of ruptured abdominal aneurysm, Ann. Int. Med. 48: 834, 1958.
7. Lipshutz, B. and Chodoff, R. J.: Diagnosis of ruptured abdominal aortic aneurysm, Arch. Surg. 39:171 (Aug.) 1939.
8. Stallworth, J. M., Price, R. G., Jr., Hughes, J. C., III, Parker, E. F.: Surgical treatment of ruptured abdominal aortic aneurysm; Ann. of Surgery, 155 Nos. 711-721, May 1962. Creech, O., Jr. Comments.

This rare dermatosis looks like a scald, and is about as lethal. Corticosteroid therapy may be life-saving!

Toxic Epidermal Necrolysis

A Case Report

SHARON J. BINTLIFF, M.S., M.D.,* *Honolulu*

TOXIC epidermal necrolysis is a most unusual clinical syndrome beginning with tenderness and erythema of the affected areas of skin. The damage is found exclusively in the epidermis, producing a variable degree of lysis of the epidermal cells.

This condition was first described by Lang and Walker[1] in 1956, and the term "toxic epidermal necrolysis" was suggested by Lyell[2] in the same year. Until 1960 all cases reported were from the British and South African literature.[1-6] Potter *et al.*[7] described the first case in the American literature, and since that time there have been several additional reports.[8-12]

Death has occurred in about 30 per cent of the recorded cases, and since administration of corticosteroids early in the course of the disease may help to prevent a fatal outcome, early diagnosis is of utmost importance.

A 14-month-old girl with this condition is presented to review the clinical syndrome to alert the physicians in Hawaii that this may not be as rare as previously thought.

CASE REPORT

A 14-month-old Chinese-Filipino-French girl was hospitalized at Kauikeolani Children's Hospital on August 4, 1965, because of a progressive, severe erythema resembling sunburn or scald. She had been quite well until three days prior to admission when she was noted to be fussy, and awoke often through the night. The next morning her aunt noted several small blister-like lesions on the chin. Over the next six hours she developed puffy eyes, purulent conjunctivitis, and a sunburned appearance over the entire face and neck. She was seen that evening by her physician, who gave her one intramuscular injection of 600,000 units of procaine penicillin.

The following day large blisters were again noted on the chin and in the creases of the neck. The erythema also involved the axillae, antecubital and popliteal fossae, and groin. A second injection of procaine penicillin 600,000 units was administered that day.

The day of admission she was given a bath by her aunt and large sheets of skin were noted to come off her back when she was scrubbed. She was again seen by her physician and referred for admission to the hospital. Repeated inquiry failed to incriminate any chemical or physical contacts or medications.

Physical examination revealed an alert, active, extremely irritable girl whose skin appeared scalded and erythematous. Her rectal temperature was 101.4° F. Large vesiculobullous lesions extensively involved the skin of the axillae, groin, back, and face; on the remaining parts of the body was a diffuse erythema. Large areas of the back were denuded, leaving a reddened, raw surface. There was a mucopurulent discharge from moderately inflamed conjunctivae, and the skin about the lips was red, dry, and fissured radially. There were no demonstrable mucosal lesions of the mouth, pharynx, or urethra. Nikolsky's sign was positive.

The white blood cell count was 24,900 per cu mm with 76% segmented neutrophils, 3% bands, 20% lymphocytes, and 1% monocytes. The platelets were adequate. The hemoglobin was 12.5 gm and the hematocrit 37%. Examination of the urine was within normal limits. The antistreptolysin titer was zero Todd units. Throat culture grew Staphylococcus aureus, coagulase positive, and Pseudomonas. Culture of the skin grew Staphylococcus aureus, coagulase positive, and a blood culture was negative.

The child was placed in protective isolation, using burn technique. She tolerated a soft diet quite well. Lincocin (lincomycin) 80 mg q6h orally and prednisolone 10 mg orally t.i.d. were given. Within 24 hours the erythema began to fade and no new bullous lesions appeared. Nikolsky's sign was no longer present after the third hospital day. The patient continued to improve, and during the fourth and fifth hospital days a generalized

* Dr. Bintliff is presently a resident in pediatrics at Kauikeolani Children's Hospital.
Received for publication October 11, 1965.

exfoliation of the skin took place. The child was discharged on the seventh hospital day and steroids were discontinued on the tenth day of her illness. Her skin was noted to be completely clear of any lesions or scars after the tenth day.

COMMENTS

Up to the present time the etiology of this condition remains obscure. Careful questioning of this patient's relatives failed to elicit any type of allergic history or recent contact with physical or chemical agents. There was no history of drug ingestion prior to the onset of the illness, although several authors have stated that drug sensitivity can cause this syndrome.[12, 13]

Initially this child was not seriously ill, although within several days she had progressed to a state of extreme toxicity. Despite this, however, her appetite and mental clarity were striking. Although this case, like most reported cases, had edema of the eyelids and conjunctivitis, involvement of the mucous membranes is rarely severe as in Stevens-Johnson syndrome.[14] In other cases, a variety of premonitory symptoms such as malaise, vomiting, diarrhea, or sore throat may precede the development of the classical skin changes.[15, 16]

The most striking clinical feature of this syndrome is the skin changes. Erythema, resembling sunburn, first appears about the face, neck, axillae, and groin. This erythema may rapidly spread over the body, or merge with the next stage, as in this case. The second stage is sudden epidermal cleavage, with or without bulla formation, as large sheets of epidermis are lifted off and serous fluid may be trapped beneath. Extensive loosening also occurs without the formation of bullae, presenting as Nikolsky's sign. Within the next 24 to 48 hours the loosened skin separates, leaving large, inflamed, denuded areas, which in this case involved about 60 per cent of the body surface. In some reported cases some have had smaller areas involved, in others the entire body, exclusive of the hairy parts.[16] In all phases, but more so during the acute early phase, the skin is extremely tender and painful. The resemblance to scalding has been repeatedly affirmed as the pathognomonic sign.[1]

In this case the cessation of necrolysis was quite sudden, but in other cases it is known to subside in seven to ten days.[7] A universal post-scarlatiniform type of exfoliation is the general rule.

Some recurrences have been reported.[16]

TREATMENT

Inasmuch as this condition is reported to be associated with a 30 per cent mortality, early treatment appears mandatory. Broad spectrum antibiotics are used to prevent secondary infection. Despite the growth of Staphylococcus aureus from the skin, it was felt not to be responsible for the syndrome.[8]

The use of ACTH or corticosteroids dates back to the original report by Lang and Walker.[7] In a review of ten cases in the American literature by Constantino *et al.*,[17] seven patients received steroids and no antibiotics and the mortality was 16 per cent. Of three patients who received antibiotics only, one died. Obviously this was not a controlled series, but it suggested that steroid treatment diminished the mortality. Beare[16] felt that early administration of corticosteroids can stop further development of the syndrome but that it does not influence the outcome once epidermal necrosis has occurred. Early treatment with steroids in this patient may possibly have shortened the length of illness as well as altered the outcome. Spontaneous recovery without any medication is perhaps possible, but Beare states that this is highly unlikely.[16]

SUMMARY

Toxic epidermal necrolysis is a unique syndrome characterized by tenderness, pain, and erythema of skin, followed by necrolysis of the epidermis. Lesions may or may not involve the mucous membranes or conjunctiva and the patient may or may not be extremely ill.

A case of toxic epidermal necrolysis is reported from the Kauikeolani Children's Hospital. Treatment with antibiotics and corticosteroids, as soon as the diagnosis is made, is advocated. ■

REFERENCES

1. Lang, R., and Walker, J.: An unusual bullous eruption, S. Afr. Med. J. 30:97 (Feb.) 1956.
2. Lyell, A.: Toxic epidermal necrolysis. An eruption resembling scalding of the skin, Brit. J. Derma. 68:355 (Nov.) 1956.
3. Lang, R., and Walker, J.: Toxic epidermal necrolysis. A report of four cases, S. Afr. Med. J. 31:713 (July) 1957.
4. Catto, J. V. F.: Toxic epidermal necrolysis, Brit. Med. J. 2:544 (Sept.) 1959.
5. Evans, C.: Toxic epidermal necrolysis, Brit. Med. J. 2:827 (Oct.) 1959.
6. Frain-Bell, W., and Koblenzer, P.: Two cases of toxic epidermal necrolysis, Proc. Roy. Soc. Med. 52:1029 (Dec.) 1959.
7. Potter, B., Auerbach, R., and Lorincz, A. L.: Toxic epidermal necrolysis. Acute pemphigus, Arch. Derm. 82:903 (Dec.) 1960.
8. Frain-Bell, W., and Koblenzer, P. J.: Toxic epidermal necrolysis, J. Pediat. 58:222 (May) 1961.
9. Baird, R. L., and Reichelderfer, T. E.: Toxic epidermal necrolysis (scalded skin syndrome), Clin. Pediat. 2:16 (Jan.) 1963.
10. Grover, R. W.: Toxic epidermal necrolysis (Lyell), New York J. Med. 62:869 (Mar.) 1962.
11. Jarkowski, T. L., and Martmer, E. E.: Fatal reaction to sulfadimethoxine (Madribon), Amer. J. Dis. Child. 104:669 (Dec.) 1962.
12. Costantino, E., Musgnug, R., and Floyd, F.: Toxic epidermal necrolysis, Amer. J. Dis. Child. 108:201 (Aug.) 1964.
13. Browne, S. G., and Ridge, E.: Toxic epidermal necrolysis, Brit. Med. J. 1:550 (Feb.) 1961.
14. Stevens, A. M., and Johnson, F. C.: A new eruptive fever associated with stomatis and ophthalium. Amer. J. Dis. Child, 24:526 (Dec.) 1922.
15. Rook, A.: Toxic epidermal necrolysis (Lyell). Arch. belges dermat. et syph. 13:396, 1959.
16. Beare, M.: Toxic epidermal necrolysis. Arch. Derm. 86:638 (Nov.) 1962.

A rare reason for occult intra-abdominal bleeding.

Idiopathic Hemorrhage from Ovarian Artery

Case Report

WAYNE S. LIMBER, M.D., HUGH L. DAVIS, JR., M.D.,
and ROBERT E. BOYD, M.D., *Honolulu*

• *A patient suspected of having either right renal calculus or acute appendicitis as a basis of severe lower abdominal pain with shock was found at surgery to be bleeding from the right ovarian artery. No cause for the bleeding could be ascertained. Recovery was uneventful.*

SPONTANEOUS bleeding from the ovarian artery has not previously been reported.

A 40-year-old Hawaiian-Chinese woman was admitted to the Kaiser Foundation Hospital on March 29, 1964, complaining of right flank and right lower quadrant pain. Patient had been feeling well that afternoon, when she suddenly described severe pain in the right lower quadrant and right flank, accompanied by anorexia and nausea. There were no fever, chills, or urinary symptoms. There was no diarrhea. She did not vomit. Because of the severe character of this pain and weakness, she presented herself to the Emergency Room.

In July, 1963, the patient had been hospitalized on two occasions for severe acute, right lower quadrant and right flank pain. On both these occasions, microscopic hematuria was found and obstruction of the right ureter on intravenous pyelogram was noted. Cystoscopy and retrograde pyelography were negative on both these occasions. It was believed each time that she had passed a small ureteral calculus.

The patient had suffered from severe menorrhagia for three years and had been treated for marked iron deficiency anemia with oral iron. The patient was menstruating at this time. Her period was according to her expected schedule. She denied recent coitus or symptoms of pregnancy. She was gravida IV, para IV with no miscarriages.

She had had no surgery in the past and there was no history of systemic disease. She drank moderately but did not smoke.

Physical examination on admission: Blood pressure was 78/60, quickly rising to 90/70. The pulse was 80 and regular. She showed moderate pallor and complained of severe right lower quadrant pain. Positive physical findings were limited to the abdomen, where the right lower quadrant manifested tenderness, fullness, guarding, and rebound. Pelvic examination revealed moderate menstrual bleeding. Uterus was slightly enlarged and globular and there was marked tenderness in the right adnexal area. Rectal examination revealed tarry guaiac-negative stool (patient was

Received for publication September 28, 1965.

taking oral iron). The admitting impression was possible right ureteral calculus or acute appendicitis.

The admission hemoglobin was 9.7 gm, hematocrit 33, white blood count 22,800 with 95% segs, and 5% lymphocytes. The catheterized urine revealed a trace of protein, 0-2 red cells/hpf, 0-3 white cells with many bacteria.

COURSE IN THE HOSPITAL

During the evening and night of admission, the patient continued to complain of right lower quadrant pain, which was relieved by Demerol. The morning following admission, a repeat blood count was obtained. The hemoglobin was 8.6 gm, hematocrit 29%, white count 17,330 with 78% segs, 9 bands, 6 lymphocytes, 5 monocytes, 1 eosinophile, and 1 basophile. The serum amylase was 120 Somogyi units. Intravenous pyelogram showed that the pelvocalyceal system on the right was high and somewhat lateral in position and the right psoas margin was obliterated. Impression of the radiologist was an expanding retroperitoneal mass, a hematoma, or a tumor. The patient continued to complain of pain throughout the morning. Gynecologic consultation confirmed the admission pelvic examination. No blood was aspirated by culdocentesis. At this time, the hemoglobin had fallen to 7.3 gm with a hematocrit of 26 and the patient looked as if she were in shock. Transfusions were started, and operation was performed.

At surgery, the right retroperitoneal space and the broad ligament were full of blood. The right ovarian artery was found to be bleeding profusely. As soon as the right ovarian vessels were clamped, pulsation in the aorta increased and her blood pressure, which was barely obtainable, rose to normal levels. The removal of blood clots from the retroperitoneal area disclosed large varicose veins in the left broad ligament. No other bleeding sites in the intestines or pelvis were noted. The uterus was noted to be somewhat irregular and about one and one-half times enlarged. The right kidney was normal but displaced by the hematoma. A right salpingo-oophorectomy was performed.

Pathological examination of the specimen revealed a large blood clot, a firm yellow-tan ovary, 3.4 x 2.0 x 2.0 cm, and an oviduct 7.0 cm in length. In the mesosalpinx, there was a blood vessel protruding to external surface; adjacent to this there was a convolution of blood vessels of similar caliber. On microscopy, there were thick-walled veins imbedded in a fibromuscular stroma in the oviduct and mesosalpinx. No decidual reaction was seen. There were also small follicular cysts of the ovary.

The postoperative course was benign and she was discharged eight days later.

Postoperative laboratory tests revealed a platelet count of 150,000, a clotting time of five minutes, a bleeding time of two minutes, and prothrombin level of 60%.

The patient's subsequent course has been marked by severe menorrhagia requiring transfusions, continued iron therapy, and a dilatation and curettage. She has had no further episodes of abdominal pain.

The patient represents the only known case of spontaneous hemorrhage from an ovarian artery. Injury has been postulated, but the patient denied any trauma. Complete coagulation studies were not performed, but the finding at surgery of a ruptured major artery explains the hemorrhage. There is a history of excessive alcoholic intake, but no recent heavy drinking or loss of consciousness were admitted. No clear-cut connection could be made between the varicosities in the pelvis and the bleeding ovarian artery.

In the future, this rare cause of hemorrhage in the pelvis should be considered in women in whom pregnancy is excluded. The differential diagnosis includes endometriosis, ectopic pregnancy, bleeding ovarian cysts,[1] ruptured pelvic varicose veins and blood dyscrasias.[2] Postpartum spontaneous rupture of an ovarian artery aneurysm has also been reported.[3]

SUMMARY

A case of idiopathic hemorrhage from the right ovarian artery is reported. This rare entity should be included in the differential diagnosis of occult bleeding in the abdomen. ■

1697 Ala Moana Blvd.

REFERENCES

1. Rosenthal, A. H.: Rupture of the corpus luteum including four cases of massive intraperitoneal hemorrhage, Am. J. Obst. & Gyn. 79:1008 (May) 1960.
2. Hunter, D. T., Jr., and Hill, J. H.: Leukemia, ovulation and fatal intraperitoneal hemorrhage, Obst. & Gyn. 15:364 (Mar.) 1960.
3. Cailloutette, J. C., and Owen, H. W.: Postpartum spontaneous rupture of an ovarian artery aneurysm, Obst. & Gyn. 21:510-511 (Apr.) 1963.

HAWAII MEDICAL JOURNAL

Editorials

The Aloha United Fund

The Hawaii chapters of the American Heart Association and the American Cancer Society will participate in the Aloha United Fund drive this fall, along with the Mental Health Association, Muscular Dystrophy, and Cystic Fibrosis and the other agencies formerly affiliated with the Community Chest. The Chest is no more. This trial participation by Heart and Cancer has the approval of their national headquarters.

The two big seals-by-mail appeals—Tuberculosis and Easter Seals—will remain independent, as will the group for Retarded Children, The National Foundation, and the Cerebral Palsy group.

The United Fund appeal is to be made to individuals and corporations in business, industry, and government only, with no residential drive. Donors will be able to give their entire donation to Heart or Cancer if they wish, as long as the total "designated" amount does not exceed the total allocation to the Chapter.

The regular Chest agencies, including the Mental Health Association, will have their allocations of funds determined by a committee of the Fund, on the basis of need, as in the past. And they will conduct no other drive except for memberships.

Heart and Cancer, however, will each receive a lump sum—the entire sum if the Fund's goal is reached; a proportionate fraction of it if the drive falls short of the goal. The sum is a realistic one, based on the anticipated collection in this segment of the community in the past, plus 10-15 percent for increased needs, plus a little more than twice this to offset the amount by which this drive is expected to reduce the "take" in residential areas.

For these two organizations will be permitted to pursue their usual fund drive methods in areas other than business, industry, and government. They will each conduct a house-to-house drive (honoring the sticker given for the purpose to those who have "given at the office"), and will be allowed to accept legacies and memorial and other gifts, as in the past, without these sums' being deducted from their United Fund allotment. Undoubtedly this will be permitted to go on just as long as the United Fund feels it is compelled to allow it, and no longer—but for the present, it is to be allowed.

This participation, this near-affiliation, of Heart and Cancer with the United Fund, was not arrived at without a good deal of the proverbial agonizing reappraisal. To put it bluntly, a noble moral principle—the principle of individual responsibility on the part of the givers—collided head on with an inescapable fiscal fact: the fact that a payroll deduction plan in business, industry and government can raise far more money with far less trouble and expense than the old way ever could. And the noble principle got clobbered.

The most important single thing any major health agency can do is to generously support research in its field in imaginative ways not yet possible to government; and to this end, the most important thing the agency can do is to raise a lot of money.

In our judgment, this outweighs in importance the value of permitting a donor to strike a balance between his generosity and his penury and determine how much he will give, and to which health agency. It does not wholly outweigh the educational value to the public of an individual health-agency fund-drive, but this will be retained under the Aloha United Fund approach. So, happily, will the possibility of making individual contributions directly to Heart or Cancer, or both. The great appeal value of these major organizations will strengthen the entire drive by the A.U.F.

It is devoutly to be hoped that this new United Fund drive will be a success. It is, with Heart and Cancer in it, an almost unique American experiment. It deserves the wholehearted support of every member of the community whose funds available for charitable contributions are not already committed elsewhere. A donor who could afford it, and who isn't giving generously elsewhere, ought to be ashamed of himself if he isn't giving generously to the Aloha United Fund; but one who *is* giving elsewhere ought to be let alone. We don't subscribe to the view that a man who's merely stingy ought to have his arm twisted. He has enough trouble already.

Book Review: *Ferment in Medicine*[*]

This book is an outgrowth of a series of lectures given to medical students at the University of Minnesota—lectures the like of which most of us never received in medical school, yet which are sorely needed. Here is a sincere and helpful analysis of the role of the American physician today, betrayed partly by his own education and partly by his own misguided dream, half-unconsciously clinging to an image of a simpler time, a simpler (and more flattering) system of one doctor and one patient. First there is a careful definition of the social contract implicit between the one doctor and the one patient; how this contract is confused by our medical notion that we are here to treat "diseases," like casting out the evil spirits of another era; how the patient finds comfort in our delusion, yet at the same time resents the fact that we are stepping aside from our *real* social contract, which is to treat sick people, not just their "diseases." The contract is a relationship between two people, not a manipulation of one person by another.

We are taught by our medical school and hospital experience to think of episodic care, not long-term management. This anachronistic way of thinking is reinforced by the insurance companies, who think the same way and pay us that way. It is imperative that each medical student should have a period of common training where he becomes imbued with the idea of indivisibility of medicine (and of the patient) in different settings —home, job, hospital, public health services, or research institution. The central problem we face is how to deliver *comprehensive* medical and health maintenance care when it is: (1) not demanded by the patient, (2) not paid for by insurance, and (3) vanishing by default as medicine becomes more complex. Is someone to be trained to fill this role (not the general practitioner fighting for his surgical privileges, nor the internist preoccupied with his search for "real disease," nor the psychiatrist with his disregard for organic disease) or shall we let the patient muddle through on an *à la carte* basis?

Presumably the development of integrated specialty groups (now comprising less than 10% of American physicians), preferably near or in association with a hospital for use of its auxiliary personnel, would be a setting in which the necessary expertness can be provided to the patient, and in which paid time off for continuing education can be provided to keep up this expertness. Group practice can also offer a reasonable compromise between the demands of the patient for 24-hour availability and the social ideal that a man should have some time to spend with his family.

A basic problem, however, that most such groups have yet to solve, is the question of who is fundamentally responsible for the coordination and integration of the care, and whether he is really qualified to assume this role. Too often the patient "falls between the stools" because the doctors in specialty groups tend to drift into a comfortable collusion of anonymity.

Our basic malaise as physicians is that we are discovering that we have not achieved the secure, exalted social status accorded to the doctor of our dreams, who was one of the few educated men in the community. Instead, we find ourselves only one educated man among many in an increasingly complex society, and we have lost our autocratic "godlike" role even in "our own" institution, the hospital.

"The central plot of this story is, in a sense, the central plot of all social history—man's struggle to rearrange his social organization and institutions, to keep pace with his accumulating knowledge, changing needs and altered environment. As in all phases of human enterprise, realistic available choices are limited, but they are not absent. Freedom to avoid the basic fact of change does not exist —either biologically or socially—but the character and adequacy of the adjustment to change is, in varying limits, subject to human decision. It is, of course, possible for a society or a group to attempt to resist adjustments altogether—either actively or by inertia—but the price is to be run over."[1]

This book is strongly recommended. There is something here for each of us, and the message is relevant enough to carry us through the wordiness and repetition that is, alas, the hallmark of us professors. ■

ROBERT M. WORTH, M.D., Ph.D.

[*] Ferment in Medicine: a Study of the Essence of Medical Practice and of Its New Dilemmas, by Richard M. Magraw, M.D., 270 pp., $6.50. Philadelphia, W. B. Saunders Co., 1966.

[1] Somers, H. M., and Somers, A. R : The Paradox of Medical Progress. *New Eng. J. Med.*, 266:1253, 1962.

HAWAII MEDICAL JOURNAL

In Memoriam – Doctors of Hawaii

This is the sixty-second installment of In Memoriam—Doctors of Hawaii.

John Augustus Leas

John Augustus Leas, born in 1884, was a graduate of the Indiana University School of Medicine, Indianapolis, in 1908.

In 1920 Dr. Leas was in practice in Honolulu. By 1923 he had located in Los Angeles and was specializing in urology.

Dr. Leas died May 26, 1932, in Los Angeles at the age of 47.

He was a veteran of World War I, a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Howard Clarke

Howard Clarke was born in New Orleans, Louisiana, on November 22, 1883, the son of Robert and Emogene (Lockwood) Clarke.



DR. CLARKE

He was graduated from Tulane University Medical School in 1903. During his college days he played fullback on the Tulane eleven for three years and was selected for the All-American and All-Southern teams in 1903. In 1905 Dr. Clarke completed his internship at Charity Hospital in New Orleans.

Following a trip abroad, he returned to New York where he practiced until 1910 when he joined the Army Medical Corps. While living in New York, Dr. Clarke was a member of the visiting staff of the New York Eye and Ear Infirmary, serving under Dr. Wilbur M. Marple. He was also on the visiting staff of the Manhattan Eye, Ear, Nose and Throat Hospital under Dr. Lewis A. Coffin. During this period, the doctor was a member of the 7th regiment of the New York National Guard.

Dr. Clarke was married to Miss Eleanor Tracy, and they became the parents of two sons, Samuel Tracy and Howard, Jr.

After joining the army, Dr. Clarke served under General John J. Pershing in the campaign against the Mohammedan tribes in Mindanao, Philippines. Later he became chief of the Eye, Ear, Nose and Throat Service Department Hospital in Manila. He also headed the same department at the Tripler General Hospital in Honolulu.

In June, 1917, Dr. Clarke was ordered to France as regimental surgeon of the 18th Engineers. On his arrival he was transferred to the staff of the chief surgeon of the AEF, where he remained for the duration. He was chief of the department of transportation of the sick and wounded and was one of 40 American officers to serve in the first battle of the war in which American troops participated, the battle of Cambrai, and also in the last battle, the Meuse-Argonne. He returned to this country in 1919, an invalid. He also ordered and was responsible for the design and procurement of the United States' first hospital trains. He was decorated by both the United States and France.

Coming back to Hawaii in 1920, Dr. Clarke became a founding partner of The (now Straub) Clinic, specializing in diseases of the eye, ear, nose, and throat. In 1925 he left the group and opened an office in the Young Building for the practice of his specialty.

On September 9, 1934, the insignia of Chevalier of the Legion of Honor was conferred on Dr. Clarke by Capitaine de Frégate Feraud, commandant of a French naval vessel which was visiting Honolulu at the time. Immediately after the war the doctor had received the diploma of honor from the French government.

Dr. Clarke died of gastric carcinoma on January 6, 1935, in Honolulu, at the age of 51.

He was a member of the American Medical Association, a fellow of the American College of Surgeons, a member of the Honolulu County Medical Society, and a 32nd degree Mason.

EDITOR'S NOTE—Part of Dr. Clarke's biography was published in our last issue. It is reprinted here in complete form. ■

HAWAII MEDICAL JOURNAL

This Is What's New!

• Well over half of **older men** with **positive serological tests for syphilis** have biological **false-positive** tests, with negative TPI (treponemapallidum immobilization) tests. The biological false-positive tests were unexplained even by extensive laboratory investigation. There was no increased incidence of collagen disease. (*Arch. Derm.* [Apr.] 1966.)

• **Pulmonary function tests** may help determine the employability of patients with chronic **bronchitis and bronchiectasis,** although striking discrepancies were found between work capacity and abnormalities of pulmonary function. The **maximum breathing capacity** was particularly helpful in determining the degree of respiratory disability. (*Amer. Rev. Respiratory Dis.* [Mar.] 1966.)

• The **treatment of Asiatic cholera** has been extensively revised following study of the causes of a 30 percent mortality rate of patients hospitalized in Calcutta and treated in the conventional manner. The most common cause of death was hypovolemic shock, base deficit acidosis, and acute renal failure. Until 1963, the value of antibiotic therapy was unknown. **Oral tetracycline** was found to eradicate the cholera bacteria from the stool, and isotonic saline and isotonic sodium lactate in a 2:1 ratio was effective in correcting the saline defect and acidosis. The IV fluid requirements were quite large, at times up to 20 liters per day. (*Bull. Johns Hopkins Hosp.* [Mar.] 1966.)

• **Pituitary gland ablation** by pituitary stalk section or hypophysectomy was performed in 26 patients with advanced **diabetic retinopathy.** Result: three patients died, but almost all of the survivors, after a latent period of six to twelve months, had no further progressive visual deterioration due to diabetic retinopathy. (*Canadian Med. J.* [Mar. 26] 1966.)

• **Age should be no contraindication** to open heart surgery, according to Houston surgeons. Fifty-four patients aged 60 years or older underwent **open heart surgery,** most for left ventricular aneurysms or aortic valve disease. Operative mortality was 20 percent for the entire series and 11 percent for the last. (*Circulation* [Apr.] 1966.)

• After a twelve-year study of over 5,000 individuals in Framingham, it is concluded that the **cholesterol-phospholipid ratio** is of **no value** in the prediction of **coronary heart disease.** The cholesterol and phospholipid levels independently, however, are of some value. (*New England J. Med.* [Mar. 31] 1966.)

• **Coxsackie A-16** virus, usually regarded as a rather benign virus causing mild febrile illness in the summer, can produce a **hand, foot, and mouth syndrome** that is on occasion **life-threatening.** A child develops a measles-like rash, high fever, extensive desquamation of the hands, feet, and mouth, and in one case evidence of meningoencephalitis. Convalescent sera revealed high antibody titers against Coxsackie A-16. (*Pediatrics* [Apr.] 1966.)

• A San Francisco radiologist, after studying patients with primary untreated bronchial cancer, concludes that on the average a peripheral, **squamous cell cancer** requires about **8 years** to reach a diameter of 2 cm and a similarly located **adenocarcinoma** requires about twice that long, or **16 years** to reach the same size. During this largely preclinical stage, the tumor cannot be recognized by standard x-rays, and **metastases may occur,** making surgical cure impossible. (*Amer. J. Roentgenol.* [Mar.] 1966.)

• If growth hormone concentration is any guide, **children grow more during the night** and several hours **after a meal.** Hourly determinations of plasma growth hormone levels indicated that high levels were found during these times in nine youngsters studied in Edinburgh. (*J. Endocrinol.* [Feb.] 1966.)

• Abnormal intraocular pressure was found in 3.7 percent of 909 **apparently well** individuals and a diagnosis of **actual glaucoma** was made in **2.8 percent** of the total group. (*J. Occupational & Industrial Med.* [Mar.] 1966.)

• Tennessee researchers have discovered that inclusion of **orange peel** in the diet of monkeys does not increase **intraocular pressure.** (*Toxic. Appl. Pharmacol.* [Mar.] 1966.) ■

FRED I. GILBERT, JR., M.D.

Hawaii Academy of General Practice

PRAECEPS PRAECEPTORES

The medical student, leaving behind the basic sciences, enters the gates to clinical medicine and the brave world of medical controversy. Where previously he had been taught the incontrovertible facts of anatomy and chemistry, he now becomes aware of the variable reactions between vector and host in disease; he soon learns that there are very few "facts" and no truths *per se*. His critical faculties give more weight to who his teacher-of-the-moment is, than to what this teacher teaches.

So it is that a well-turned-out M.D. of today enters the practice of medicine firmly grounded in the concept that there is no set standard, no one-way-only to diagnosis or to treatment "by the book." He has graduated from the world of textbooks into the era of free thought and action exemplified by the modern medical journals which are replete with medical controversy.

DISILLUSIONMENT

The young medico happily admits his first hospital patient. Then what happens?

The doctor soon discovers that under the pious guise of "improving the standards of medical care," his colleagues are only too eager to "review" his work, with their suspicious noses ready to be looked down. The young attending will not have to look far to see for himself a colleague only too ready to criticize: (a) the need for this hospitalization, (b) the need for a blood transfusion, (c) the use of antibiotics, (d) the use of steroids, (e) the failure to call in consultants, (f) the failure to take more laboratory or x-ray tests when clinical judgment alone could save the benighted patient an ache in his pocketbookum, and (g) the reverse of all these.

You must conform, conform, conform . . . Rules and regulations, more rules and more stringent regulations . . . Where are these vaunted freedoms? The freedom to put into practice one's own distillation of what's best for this patient?

LIFE IS SHORT, THE ART LONG

Surely everyone must agree, in this day and age of the speeding up of life by means of the jet, the computer, and by automation, that time is more short and more precious than ever before. The twelve times longer it takes to write "not remarkable" instead of "N," may be picayune as an example, but it is rather basic in the consideration of time wasted that could be better spent by the busy physician in giving his patient an extra minute or two of thought to diagnosis or to treatment.

Not only is the young attending acutely aware of these time-wasting injunctions of the JCAH, to: (a) Disallow the use of abbreviations or shortcuts, and (b) insist on summaries (better named ruminations!) . . . but he is now faced with the latest directive from the JCAH, at the behest of MEDICARE . . . (c) Utilization Review!

GUILTY, UNTIL PROVED INNOCENT!

My colleague has his M.D. degree from a Class A medical school of national reputation; he has his legal license to practice medicine in this State; he may even have his "Boards." Nearly all of my colleagues do, nowadays. Could he have gotten these qualifications of excellence if he had not "passed"? No! Why then should I presume him guilty of misconduct even before he proves himself on his first case? And, what right have I, or you, to "raise" the quality of the medical care he is so well trained and tested to dispense? What right have we to even pass on it?

CRY: FOR SHAME!

By accepting not only the concept thrust upon us of "Utilization Review" on a spot-check "retrospective" basis, but even, and especially, the burden, in time to be wasted and in petty irritations, of "prospective" review of every admission and to follow the case, we have, in fact, capitulated to an accusing Big Brother.

Pity the poor MEDICARE patient. He was promised 90 days in the brochure, but he is to be allowed only ten, or five, or two days in hospital.

Pity the patient's poor doctor, who, joining with his colleagues, is witlessly accepting the federally mandated role of *Praeceps praeceptores,* and in so doing, is furthering the Gross National Deceit!

J. I. FREDERICK REPPUN, M.D.
Secretary ■

HAWAII MEDICAL JOURNAL

New Members



Jordan S. Popper, M.D.
1270 Queen Emma Street, Room 305
Honolulu, Hawaii 96817
NEUROLOGY
University of Buffalo—1956
Internship—Sinai of Baltimore—1956-57
Residency—Walter Reed General Hospital—1958-60



Gurcharn Koch-Brar, M.D.
825 Keeaumoku Street
Honolulu, Hawaii 96814
OBSTETRICS-GYNECOLOGY
Punjab University, Amritsar, India—1952
Internship—Grand Central Hospital, New York—1961-62
Residency—Goldwater Memorial Hospital, New York—1956
Jamaica Hospital, New York—1956-57
Beth Israel Hospital—1958-60
Grand Central Hospital—1960-61
Trafalgar Hospital—1962-63



Raymond Y. W. Chock, M.D.
1415 Kalakaua Avenue, Room 214
Honolulu, Hawaii 96814
NEUROLOGY
Boston University School of Medicine—1961
Internship—St. Francis Hospital, Honolulu—1961-62
Residency—Boston V. A. Hospital—1962-65

County Society News

Honolulu

The May 3 meeting was preceded by a film on "Cancer of the Oral Cavity." Five new members were introduced: Drs. Frank S. Akamine, Keiichi Goshi, Edward Izawa, Walter Shim, Hau Ngoc Vu. Progress reports on the Foundation and Medical Plaza were given, and the program concluded with a panel discussion of the "Physician's Role in Medicare" presented by Mr. Daniel W. Pettengill, and Drs. Ernest E. Simard, Keith Kuhlman, J. I. F. Reppun, Wilbur S. Lummis, and Theodore Tomita. Dr. Rodman Miller served as moderator.

Hawaii

Dr. Merton E. Berk was a guest at the June 16 meeting. Drs. Miyamoto and Helms reported on the HMA's annual meeting. Society approval was given to bring in Dr. G. S. Cash to work in Honokaa. The new PKU law was reviewed. A request for a donation to the HFPC was referred to the Finance Committee. It was announced that an osteopathic physician was admitted to the staff of the Kona Hospital. The meeting concluded with a paper on "Defibrillator."

Maui

Thirteen members were present at the May 26 meeting when a Physician–News Media Code of Ethics was adopted. Dr. Iaconetti was appointed to serve in an advisory capacity and members of the Society and news media were urged to confer with him if questions arise. Dr. Haling reminded the members to pay their HAMPAC dues. Dr. Moran gave a report on the actions taken at the recent HMA's House of Delegates meeting.

GEORGE FRANCIS STRAUB, M.D.
1879-1966

George Francis (christened Georg Franz) Straub was born March 14, 1879, in Edenkoben, Bavaria, Germany. His father was a surgeon, and was to become Surgeon General of the Bavarian Army in World War I. His mother was a fifth-generation descendant of the famous "Asklepiad family" of von Siebolds, which had begun with Karl Kaspar von Siebold (1736-1807).

Dr. Straub always took great pride in his descent from this remarkable family of medical teachers, authors, and practitioners. His great-grandmother, Marianne Charlotte ("Mina") von Siebold Heidenreich, an obstetrician, was present at the birth of Queen Victoria. A great-great-uncle, Philip Franz von Siebold, achieved distinction as a physician-scientist and unofficial ambassador to Japan from 1823 to 1826, long before that country was opened to Western visitors.

Dr. Straub's preclinical medical studies were at the University of Wuerzburg, of which his great-great-grandfather had been Rector. He took his clinical work under such men as Roentgen, Erb, and Kussmaul at the University of Heidelberg, where he received his M.D., *summa cum laude,* in 1903.

In the same year, Dr. Straub fled from Germany to escape the consequences of an altercation provoked by a bullying older cousin, his Army superior. After a brief pause in London, he went to New York, where he established himself in the practice of surgery and married a French-Canadian girl. The marriage lasted only a few years, ending in divorce.

In the winter of 1907, dissatisfied with life in New York, he came to Hawaii, arriving in January, 1908, just in time to fall victim to "boo-hoo fever," as dengue was called in the then current epidemic. He soon had a thriving surgical practice, with his office located at the corner of Hotel and Richards Streets. This burned to the ground in 1910, and in later years he wrote that the idea of founding a clinic first came to him as he stood pondering the ashes.

He was not long in making a fresh start, and by 1915 was so busy that he employed a young assistant, Dr. Guy C. Milnor, who had just finished an internship at The Queen's Hospital and a term of duty as plantation physician at Puunene, Maui. In 1917, Dr. Milnor left to serve in the Army, and during his absence Dr. Straub's idea of organizing a group of doctors became crystallized.

The first need was a building. In 1912 he had built a two-story frame house at 401 South Beretania Street, at the corner of Miller Street, where the State Capitol is now being built. He lived on the second floor; the first floor had room for medical offices for three men, and a small drug room with one Bunsen burner which served as the only laboratory. He had only to vacate the second floor to make room for additional offices and a large laboratory, and this he soon did, moving into a spacious home at Kaalawai.

The next need was additional physicians. By the end of 1920 he had secured three: Arthur Jackson, an internist just back from Siberian service with the Red Cross; Eric A. Fennel, a clinical pathologist just out of the Army; and Howard Clarke, an eye, ear, nose, and throat specialist, also fresh from the Army. Milnor, back from the war, became the group's obstetrician; and in January, 1921, the five of them signed articles as partners in "The Clinic."

Straub firmly vetoed the suggestion that the group bear his name, anticipating that the hostility aroused by his German origin and accent (World War I had just ended) and by his fierce outspokenness might be transferred to the organization. Not until 1952, over thirty years later, did he relent and give his permission.

Gruff, abrupt, and uncompromisingly severe as he was, Dr. Straub was capable of kindness, too. He once removed from the chest of a patient with a draining pleural fistula a rubber drainage tube, left there inadvertently some months before by one of his most vocal critics. He returned it to this surgeon by the hand of one of his young partners, with instructions to tell him where it had been found, and to assure him that only the three of them knew what had happened, and no one else would ever know.

Music was Straub's second life. He played the cello in an amateur string quartet, and bassoon in the Honolulu Symphony Orchestra. His principal avocation was making fine violins. He completed over a score of these, many of them of superior quality, during a period of perhaps fifty years.

He wrote very little for publication, but in 1932 he had published a small textbook on thoracic surgery. Its rather unfavorable reviews and reception were a severe disappointment to him.

In 1932, his nine partners voted to erect a new building at the corner of Hotel Street and Thomas Square. Dr. Straub resisted the move, and never participated in it: he retired from practice and resigned from the partnership just before the new building was finished, in 1934. He never practiced medicine again, except for a period of almost two years during World War II, when he returned to active practice with the group to help alleviate the shortage of civilian physicians.

He kept in close touch, however, driving to the office regularly to collect his mail, and occasionally attending the monthly professional meetings, which he would address from time to time on the philosophy of medical practice or on his family medical tradition. He also made the group a present of the *sabots*—the pair of wooden shoes—which he always wore in the operating room.

Dr. Straub was never an "organization man." He maintained membership in the Honolulu County Medical Society, but was never active in it or in the State or AMA organizations. He was also a member of the Honolulu Symphony Society.

He often said that one of his principal aims in life was to surround himself with beautiful things as a source of inspiration. To this end he collected *objets d'art,* from books and paintings to life-size marble statues which he placed at strategic spots along the gravelled paths in his wooded five-acre estate, Kolonos, in Woodlawn. He imported trees for this estate, among them the rare and exotic cohune nut palms which may be seen there and also in Iolani Palace grounds.

Dr. Straub married Gertrude Scott Ivers, widow of Richard Ivers, a prominent Honolulu financier, in about 1922. They had no children. Mrs. Straub died in 1959, and after her death, Dr. Straub's life became more circumscribed than ever. He rarely left his house, except once to experiment with apartment life in Waikiki. He didn't like it, and spent most of his last two years back in his old home in Manoa.

Dr. Straub died in The Queen's Hospital on May 21, 1966, of prostatic adenocarcinoma, after an illness of only a few weeks. He is survived by his only sister, living in Germany, and by the clinic and the research institute which, bearing his name, will perpetuate his memory in Hawaii.

HARRY L. ARNOLD, JR., M.D.

HAWAII MEDICAL JOURNAL

Notes and News

Health Department

The influenza epidemic from the mainland loomed menacingly earlier this year, but our trusty Health Department through sheer persistence and careful propaganda kept it from the islands. In late February, while private physicians were beginning to see toxemic cases with chills, high temperatures, and myalgia, **Leo Bernstein** optimistically reported that the Asian flu had missed Hawaii. In early March, while physicians and hospitals were being swamped by these cases, **Ralph Beery,** our epidemiologist, cautiously reported a few isolated cases of suspected influenza. At the end of March, while the outside world labored under the misconception that every other case was influenza, Ralph conceded that Type A2 influenza was in Hawaii, but denied it was in epidemic proportions. At this rate, heaven help us when a real epidemic hits us.

In 1951, **Max Levine** suggested that the BCG tuberculosis vaccine might be effective against Hansen's disease, but was unable to prove it. Recently, **J. A. Kinnear Brown** conducted such a test on 17,000 children in Uganda and was able to reduce the incidence of leprosy by 80 percent. Another feather for ole Max's cap.

Health Department officials on their pure white chargers reported that scarlet fever and strep throat led the list of communicable disease cases last year with 4,252 cases. Measles was next with 4,050 cases, compared to 928 for 1964, and rubella third, with 3,345 compared to 929. With his usual eloquence, **Ralph Berry** recommended measles vaccine for all children: "It behooves each of us to take full advantage of this opportunity to place measles alongside smallpox, typhoid, diphtheria, and poliomyelitis as another disease that the science and art of medicine have conquered."

Entrepreneurs

It seems that Mr. Entrepreneur himself, **Bob Chung,** who just happens to own two acres of land adjoining Castle Memorial Hospital, envisions a million dollar medical center if only the City Planning Commission would change the zoning from residential to commercial. Notwithstanding Bob's fervent argument that such a center will make doctors available in the immediate vicinity of Castle Memorial for emergencies, the Kailua Improvement Association felt that commercial zoning should be restricted to the central business area. The microcephalic planning commissioners whose myopic eyes cannot see beyond their noses also voted unanimously to deny Bob his dream.

In addition to the $772,000 award for their property at Hotel and Punchbowl, the **Richard Changs** were further awarded $64,076.74 in interest. We always wonder about the 3rd decimal place.

Haruto Okada is second vice president of the Hamakua Development Corporation on Hawaii which aims to stimulate local business. Enterprising **Ray Yap** and his Kahaluu Pond, Inc., plans to dredge the former fish pond to build a jetty for his combination marina–hotel–shopping center–yacht club project.

Members Speak Up

Kailua pediatrician **Bob Dimler** is concerned with the boy who is too old to play Major Little League baseball, but too small to cut the mustard in Pony League. He feels that these "In-Between" boys need another league such as a "Tween-League." Baseball leagues are fine and we are all in favor of them, but what about the poor suffering mothers who must yell themselves hoarse rooting for their sons if yet another league is added.

LSD commentary is in vogue these days. **Bill Stevens,** who worked with the drug from 1959 to 1961, warned U of H students that the odds of an LSD user having a "bad trip" are 50-50 without medical supervision. He describes it to be "chemical brain surgery" in the wrong hands, and feels that the less written about it, the better. **James Harrison** agrees that its use should be supervised. "Sometimes it's beautiful, ethereal, or highly spiritual. But it causes people to change, frequently into less production and a more disintegrated stage mentally," he warned. **Shepard Ginandes** was perturbed by a *Star-Bulletin* editorial which reversed the intent of his position on the subject of LSD. He agrees it is unwise for anyone to take LSD, since it is not yet certain how to make the drug entirely safe. He has personally taken the drug for two reasons: "First, I wanted to find out what these persons were going through. The experiences are difficult to describe. I was trying to find out if the experience had any value. Second, I was hoping to find the experience personally useful, as some users had. And I did."

Year after year, we witness the humorous, yet tragic struggle of fluoridationists vs. anti-fluoridationists at the House committee hearings. Our eloquent editor **Harry Arnold** testified that fluoridation is backed by "all but a handful of right-wing zealots." Realizing that the vocal minority opposing the bill were the elderly with precious few teeth left, Harry pointed out that fluoridation prevents tooth decay and osteoporosis in older persons as well as caries in children. Harry was then followed by anti-fluoridationist and "anti-everything new" **F. J. Pinkerton** who warned that fluorides can be dangerous and that different persons may be allergic to different drugs. F. J. cited the example of a child who was allergic to fluoride toothpaste. Everyone is entitled to his opinion, but the real tragedy is the lack of courage among our legislators who vaccilate in the face of a vocal minority while the rest of Hawaii suffers the cost and discomfort of needlessly decaying teeth. Look, Ma! No Teeth.

It seems that a coral quarry in Maili is a health hazard because of the dust and a traffic hazard because of the heavy trucks. Good citizen **Bal Raj Mehta** of the Maili Clinic is protesting the quarry operation and fighting to keep Maili land value up.

Herbalist **Frank Tabrah** of Kohala is the hunter of anti-cancer effects in Polynesian plants. He is presently studying 165 Hawaiian plants and translating a couple of hundred recipes for Tahitian medicines he picked up in the South Pacific. He has thus far studied five extracts from plants with negligible results, but he says optimistically, "It's a little early in the game."

We are grateful to **Ed Furukawa** who recounted his memories of his recent heart attack in a well-written narrative. "The experience of death coming so close haunts me. . . . It has given me a different perspective of life. I look to the future now with a bit of apprehension. At the same time, I appreciate things more instead of taking them for granted. Like my children and everyday things. . . . I guess this is where the religiousness comes in. . . . It's hard to think of death as the end, the nothing more period. You wish for something. Not nothing." He

continued page 532

HAWAII MEDICAL JOURNAL

Book Reviews

Handbook of Physical Medicine and Rehabilitation

Edited by Frank H. Krusen, M.D.; Associate editors Frederic J. Kottke, M.D., and Paul M. Ellwood, Jr., M.D., 725 pp., $16.50, W. B. Saunders Company, 1965.

THIS IS A READY REFERENCE for the busy practitioner on the implementation of physical principles in the management of chronic and handicapping conditions.

It has the shortcomings of any handbook which must skim the subject matter in order to cover considerable ground. The references are rather complete and can lead the busy practitioner to greater detail on a given subject, and all physicians should know of the book, and take the trouble to refer to the Library copy.

R. FREDERICK SHEPARD, M.D.

★Douglas & Stromme Operative Obstetrics, 2d Ed.

By R. Gordon Douglas, William B. Stromme, with assistance from Masao Nakamoto, M.D., 779 pp., $22.50, Appleton-Century-Crofts, 1965.

I HAD THE PLEASURE of reviewing the first edition of this book, published in 1957. Douglas and Stromme present a sophisticated approach to the practice of obstetrics and gynecology, but in simple language and in an easily readable print and organization.

In this edition the basic text remains the same, with minor revisions, mostly additions. The most important are intrauterine amniocentesis for diagnosis and treatment of the rH-sensitized baby, intrauterine transfusion, and peritoneal dialysis. If you bought the first edition, as I did, it would not seem worth while to turn it in for the newer edition just for the additions. However, if you do not have this book, I recommend that those of you in the training and practice of this specialty, obtain your copy for ready reference.

FUGATE CARTY, M.D.

★Management of the Patient with Cancer

Edited by Thomas F. Nealon, Jr., M.D., 1,067 pp., $27.50, W. B. Saunders Company, 1965.

THIS COMPILATION of the latest trends in the diagnosis and management of neoplastic disease, by 71 contributors from major medical centers throughout the country, presents a wealth of succinct data regarding the most feasible and practical methods of treatment of various neoplasms. Of interest is the increasing emphasis on the use of combined therapy, e.g. irradiation and surgery or chemotherapy and surgery.

The text is divided into two parts, the first discussing general principles regarding etiology, diagnosis, and various treatment modalities of cancer. The second section concerns tumors of the various anatomic areas, written by those with extensive experience in each of these areas. A generous bibliography is included at the end of each chapter for those interested in greater depth. A good reference text for residents in training and those interested in oncology.

EDWARD JIM, M.D.

★ means highly recommended.

★Emergency Psychotherapy and Brief Psychotherapy

By Leopold Bellak, M.D., and Leonard Small, Ph.D., 253 pp., $9.75, Grune & Stratton, 1965.

THIS IS AN EXCELLENT handbook for those who intend to do emergency and brief psychotherapy along analytic lines. Dr. Bellak is a scientific methodologist and clinician of the first order and this small volume reflects the organization of his thinking. In 79 pages basic principles of psychotherapy are covered and in 50 pages more some clinical syndromes with short case histories are presented. There are also highly detailed case presentations in the appendices.

My only criticism is of the chapter on Panic. This is so frequently seen by the general psychiatrist it certainly deserves greater elaboration both theoretically and treatment-wise.

I recommend this book highly to all general psychiatrists, phychiatric residents, and medical colleagues interested in psychotherapy.

FREDERICK S. POPOFF, M.D.

Ciba Foundation Symposium on Colour Vision Physiology and Experimental Psychology

Edited by A. V. S. deReuck, M.Sc., D.I.C., A.R.C.S., and Julie Knight, B.A., 382 pp., $12.50, Little, Brown and Company, 1965.

THIS SYMPOSIUM discusses physiological and biochemical aspects of color vision. Many data are presented on visual pigment and electron microscopy of the retinas of various species of fish and animals.

The theories of color vision are discussed, and the present position of the Young-Helmholtz theory and the mechanism of the Young-Hering theory are presented.

This book would be of interest to one interested in the research-physiology field, but not to the average physician.

ROBERT T. WONG, M.D.

★Electrocardiography and Vectorcardiography

By Lawrence E. Lamb, M.D., 609 pp., $17.00, W. B. Saunders Company, 1965.

THIS TEXT DESERVES to be in the library of every heart station. The author's style makes for easy reading. The text is richly illustrated with figures, diagrams, and illustrative electrocardiograms and vectorcardiograms. Of great value are the sections on instrumentation, vector analysis, electrophysiology, and volume conductors. The author draws on his considerable experience in normal young adults to point out normal variations in the electrocardiogram. Of further value, and differing from the usual text on electrocardiography, is the emphasis placed on clinical significance of certain patterns.

This volume is probably too "heavy" to serve as a beginning text, yet is not comprehensive enough to serve as an encyclopedia. There are only a few technical points one might comment on. ■

BERNARD YIM, M.D.



Our New President

Theodore T. "Ted" Tomita became President of the Hawaii Medical Association in May, 1966, the first general practitioner to be elected to this office since Al Burden held it in 1961.

Ted was born in Waipahu on March 25, 1917, the son of Kazuo and Chiyo Tomita. His parents, both from Japan, were proprietors of a general store in Waipahu. His mother had been a schoolteacher. Much of his care up to the age of about eight was in the hands of a Spanish nursemaid, since his mother was so busy with the store, and Ted still speaks considerable Spanish.

It was at McKinley High School, from which he graduated in 1935, that Ted met Pearl Kaya. They were married in Ann Arbor, Michigan, in 1940, just after he received his Master of Science degree in zoology there. Their first two daughters, Lani Ann and Nani Lei, were born while he was attending medical school at Michigan; their third, Momi, and their son, Stilson, now 15, were born after they returned to Hawaii.

Ted had a wartime nine-months' internship at St. Mary's Hospital in Detroit—as a First Lieutenant in the Army, for which he'd volunteered just prior to graduation. When his unit, the 86th Evacuation Hospital, went overseas, he volunteered to go along, but at that time no Japanese except for interpreters were allowed at the front, so he was left behind. He was awarded an Army Commendation Ribbon for meritorious service, and promoted to Regimental Surgeon while at Fort Ord. He was separated from the Army as a Captain in October, 1947.

In 1954 Ted accepted appointment to the Program Committee of the Honolulu County Medical Society, the traditional bottom rung of the ladder he was to climb so swiftly. For the next two years he was Chairman of the Legislative Committees of both the County and Territorial organizations, where his close friendship with many key legislators in both parties proved an invaluable asset. He delegated the chairmanship of the State Legislative Committee to Dr. George Goto but is still chairman of the County Committee.

In 1961 he was elected Treasurer of the County Medical Society and a Trustee of the Hawaii Foundation for Medical Care, and in 1962 President-elect of the County organization. In 1964 he was made Chairman of the County Society's Long Range Planning Committee, and in this capacity played a major part in the development of plans for a County Medical Society office building. He is now President of the Medical Plaza, Inc.

Meantime, he had accepted appointment to a host of committees at the State Association level, and in 1965 became President-elect of that organization.

Community activities drew Ted's attention from the beginning. He had been a member of Phi Sigma fraternity while in Ann Arbor, and within just over a year after his return to Honolulu he became a charter member of the Japanese Junior Chamber of Commerce. He was instrumental in organizing the first of the annual Cherry Blossom Festivals, in 1953, and it was his happy lot to have to crown the first of the Cherry Blossom Queens. Incidentally, she is now Mrs. Calvin Kam, and her husband is starting his final year of residency in neurosurgery at the University of Missouri. In 1958 Ted transferred his membership to the Japanese Senior Chamber. He was for some time a member of the Lions Club.

Though at one time Ted made a hobby of photography, in recent years his only hobby has been golf. A member of Waialae Country Club, he plays, like most golfers, only as often as he possibly can.

Our new President is a quiet and unassuming man, whose relaxed and genial demeanor doesn't suggest to the casual observer how much energy and drive there are inside. The impact Ted has had on organized medicine at the county level, during these past few years, is already beginning to be noticeable. This is likely to be a busy year for the HMA! ■

110TH ANNUAL MEETING HAWAII MEDICAL ASSOCIATION

HONOLULU, HAWAII

May 11 through May 15

The annual meeting for the one hundred and tenth year of corporate existence of the Hawaii Medical Association was held in Honolulu in 1966. The following program was presented:

SCIENTIFIC PROGRAM

Premeeting Events

Fireside Chats—sponsored by the Hawaii Thoracic Society and the American College of Chest Physicians

Open Forum Discussions

The Prolongation of Life in the Bedridden, Pain Racked, Incurable Patient
PANELISTS: Howard E. Clinebell, Jr., Ph.D.; Howard L. Polley, M.D.; Thomas V. Rice, LL.B., J.D.

Contact Sports and My Son's Future Health—Physical and Mental
PANELISTS: Martin E. Blazina, M.D.; Edward W. Boland, M.D.; Edwin R. Fisher, M.D.; Donald A. Jones, M.D.

Papers

The Clinical Characteristics of Connective Tissue Diseases
Howard L. Polley, M.D.

The Clinical Significance of Pathologic Lesions in Collagen Diseases
Edwin R. Fisher, M.D.

Gout and Gouty Arthritis: Clinical Features and Management
Edward W. Boland, M.D.

The Adolescent and His Knees
Martin E. Blazina, M.D.

Premarital Counseling
Howard E. Clinebell, Jr., Ph.D.

Degenerative Joint Changes Occurring in Athletics
Martin E. Blazina, M.D.

Nonspecific, Anti-inflammatory Agents in the Treatment of Rheumatic Diseases
Edward W. Boland, M.D.

Army Medical Service in Vietnam Today
Major General Byron L. Steger, MC, USA

Presidential Address
O. D. Pinkerton, M.D.

The Major Variants of Rheumatoid Arthritis
Howard L. Polley, M.D.

Advances in Research of Metastatic Cancer
Edwin R. Fisher, M.D.

Marriage Counselling its Risks and Pitfalls
Howard E. Clinebell, Jr., Ph.D.

SOCIAL PROGRAM

Reception for AMA President James Z. Appel, Natsunoya Tea House
Luau, Junior Chamber of Commerce
Picnic for physicians at home of Dr. William M. Walsh

MEETINGS

House of Delegates, Mabel Smyth Bldg.
Fireside Chats, Mabel Smyth Bldg.
Scientific Program, Princess Kaiulani Hotel
Woman's Auxiliary, Ewa home of Alice Kamokila Campbell

PARTICIPATING DELEGATES

Hawaii County:
R. P. Wipperman

Kauai County:
Marvin A. Brennecke

Maui County:
Marion Hanlon
Clifford F. Moran

Honolulu County:
Marcelino J. Avecilla
Ralph M. Beddow
Edward W. Boone
Scott C. Brainard
Charles S. Brown
Walter Y. M. Chang
Charles T. H. Ching
Kenneth Chinn
William W. L. Dang
Thomas P. Frissell
George Goto
Robert P. C. Ho
Roy Iritani
Robert T. S. Jim
Keith F. O. Kuhlman
Carl H. Lum
Robert K. Mookini
Richard D. Moore
Andrew L. Morgan
Francis T. Oda
J. I. F. Reppun
B. A. Richardson
R. F. Shepard
R. Varian Sloan
Coolidge S. Wakai
Robert T. Wong

REFERENCE COMMITTEES

Public Health
B. A. Richardson, *Chairman*
Marvin A. Brennecke
Charles S. Brown
Charles T. H. Ching
Francis T. Oda

Insurance and Medical Services
R. Varian Sloan, *Chairman*
Edward W. Boone
Thomas P. Frissell
Robert K. Mookini
Clifford F. Moran
J. I. F. Reppun
R. F. Shepard

Miscellaneous Business
Richard D. Moore, *Chairman*
Marcelino J. Avecilla
William W. L. Dang
George Goto
Robert T. S. Jim

Parliamentary Affairs
Keith F. O. Kuhlman, *Chairman*
Ralph M. Beddow
Marion Hanlon
Robert P. C. Ho
Roy Iritani
Carl H. Lum
Coolidge S. Wakai

HAWAII MEDICAL ASSOCIATION

Committees for 1965–1966

AMA and Education Research Foundation Committee

Douglas B. Bell, II, Chairman
Robert E. Boyd
Raymond M. Tamura
Sorrell H. Waxman (Vice Chairman)
Francis K. L. Won
Herbert Y. H. Chinn (Councillor)
George Bracher (Hawaii)
Webster Boyden (Kauai)
K. Izumi (Maui)

Arrangements Committee

Edwin R. Ballard, Chairman
Richard K. Chun
Robert P. C. Ho
William Ito (Vice-Chairman)
George H. Mills
Dudley Seto
William M. Walsh
Frederick B. Warshauer
Randal A. Nishijima (Councillor)
G. Y. Tomoguchi (Hawaii)
Samuel R. Wallis (Kauai)
A. Y. Wong (Maui)

Automotive Safety Committee

James G. Marnie, Chairman
Truett V. Bennett
C. M. Burgess
Bernard W. D. Fong (Councillor)
James Harrison
William J. Holmes
Carl E. Johnsen (Vice-Chairman)
Rowlin L. Lichter
Edmund C. K. Lum
Norman Y. Nakamura
Walter Quisenberry
James E. Mitchell (Hawaii)
Clyde H. Ishii (Kauai)
John F. Sanders (Maui)

Awards Committee

R. Varian Sloan, Chairman
Samuel D. Allison
Homer R. Benson
Herbert Y. H. Chinn (Councillor)
Robert Y. Katsuki (Vice-Chairman)
R. P. Wipperman (Hawaii)
Burt O. Wade (Kauai)
J. Alfred Burden (Maui)

Bylaws and Parliamentary Committee

Carl H. Lum, Chairman
Harry L. Arnold, Jr. (Vice-Chairman)
Francis T. C. Au
Herbert Y. H. Chinn (Councillor)
Mor J. McCarthy
Alexander Roth
Clarence Y. Sugihara
Chisato Hayashi (Hawaii)
Burt O. Wade (Kauai)
Milton M. Howell (Maui)

Cancer Committee

Philip S. Arthur, Chairman
Francis T. C. Au
Grover H. Batten (Councillor)
Walter Y. M. Chang
Hugh L. Davis
Gilbert C. Freeman (Vice-Chairman)
Raymond H. Fujikami
Hans W. Graumann
Roy I. Iritani
Robert T. S. Jim
Albert Ho
Wilbur S. Lummis
Mor J. McCarthy
Noboru Oishi
Robert W. Peyton
Stanley M. Saiki
Francis M. Terada
I. L. Tilden
Etta W. Best (Hawaii)
Burt O. Wade (Kauai)
Billie Fern Strother (Maui)

Careers Committee

John R. Stehenson, Chairman
Henry Fong
Masaru Koike
Reginald C. S. Ho
Andrew C. Ivy, Jr. (Councillor)
Donald C. Marshall
Norman R. Sloan
Betty S. M. Soo
Doris Jasinski
Theodore K. S. Tseu (Vice-Chairman)
Phillip H. F. Watt
E. B. Helms (Hawaii)
Webster Boyden (Kauai)
Billie Fern Strother (Maui)

Chronic Illness and Aging Committee

Gordon Liu, Chairman
John W. Devereux
Bernard W. D. Fong (Councillor)
Edward Furukawa
Rowlin L. Lichter
Edmund C. K. Lum
Wilbur S. Lummis
Robert K. Mookini
Wilfred T. Ohta
David Lee Pang
R. F. Shepard
Patrick Walsh
Theodore T. Oto (Hawaii)
Y. Miyashiro (Kauai)
Edmund Tompkins (Maui)

Communicable Disease and Immunization—VD Committee

R. Varian Sloan, Chairman
Claude V. Caver
Robert G. Dimler
George M. Ewing (Vice-Chairman)
Mary A. Glover
John R. Harbinson
Ira D. Hirschy
Masaru Koike
Allan C. Oglesby
Joseph Oren
John R. Stephenson
Lawrence H. Winter
James B. H. Young
Robert M. Miyamoto (Hawaii) (Councillor)
Peter M. Kim (Kauai)
Marion Hanlon (Maui)

Convention and Seminar Committee

Richard T. Mamiya, Chairman
Gene Ahern
Walter Y. M. Chang
Kenneth Chinn (Vice-Chairman)
Robert P. C. Ho
Charles S. Judd
Randal A. Nishijima (Councillor)
Noboru Oishi
Paul Y. Tamura
Lawrence H. Winter
Francis F. C. Wong (Hawaii)
Samuel R. Wallis (Kauai)
Joseph E. Andrews (Maui)

Crippled Children Committee

Allan C. Oglesby, Chairman	1966
Jeanette H. J. Chang	1968
Herbert Y. H. Chinn (Councillor)	1967
Ralph B. Cloward	1967
Katherine J. Edgar	1967
George M. Ewing	1966
William H. Gulledge	1966
Tadao Hata	1966
George W. Henry	1967
Edmund C. K. Lum	1966
Carl Mason	1968
Frances Nakamura (Vice-Chairman)	1967
Richard K. S. Pang	1966
Niall M. Scully	1966
R. Frederick Shepard	1967
Tom K. Taira	1966
Coolidge S. Wakai	1967
Ruth E. Oda (Hawaii)	1968
W. B. Patterson (Maui)	1966
M. A. Brennecke (Kauai)	1968

Diabetes Committee

Charles S. Brown, Chairman
L. Clagett Beck
Ralph M. Beddow
Wilbur S. Lummis
Willard Y. Miyahira
Francis K. L. Won
Winfred T. Lee (Vice-Chairman)
Louis G. Stuhler
Henry B. Yuen (Hawaii)
Peter Kim (Kauai)
Kenneth A. Haling (Maui)
Samuel R. Wallis (Councillor)

Disaster Committee

Edward W. Boone, Chairman
Herbert Y. H. Chinn (Councillor)
Frank H. Hatlelid
Casimer Jasinski (Vice-Chairman)
Frederick M. K. Lam, Jr.
Rowlin L. Lichter
Isaac Kawasaki
Mor J. McCarthy
Rodman B. Miller
J. I. F. Reppun
Louis G. Stuhler
Walter B. Quisenberry
E. B. Helms (Hawaii)
Samuel R. Wallis (Kauai)
F. H. Tong (Maui)

Federal Medical Services

B. A. Richardson, Chairman
Grover H. Batten (Councillor)
Homer R. Benson
William W. L. Dang (Vice-Chairman)
George Goto
Chew Mung Lum
William F. Moore
Robert K. Mookini
Kazuo Teruya
R. P. Wipperman (Hawaii)
Burt O. Wade (Kauai)
Wm. E. Iaconetti (Maui)

Examining Board for Hansen's Disease

Wilfred H. Kurashige

Hawaiian Academy of Science Committee

Raymond M. Tamura, Chairman
Harry Arnold, Jr.
Rowlin L. Lichter
Robert H. Marks
Robert A. Nordyke
Hideo Oshiro (Vice-Chairman)
Daniel D. Palmer
Jerome L. Tucker
Robert M. Miyamoto (Councillor)
Frank L. Tabrah (Hawaii)
Webster Boyden (Kauai)
Mark Sowers (Maui)

Heart Committee

Coolidge Wakai, Chairman
Morton E. Berk
Edward L. Chesne
Bernard W. D. Fong (Councillor)
John A. Harbinson
Edward K. Lau
Wallace W. S. Loui
Wilbur S. Lummis
Clifford K. Mirikitani
Frances Nakamura
Niall M. Scully (Vice-Chairman)
David Woo (Hawaii)
Peter Kim (Kauai)
Bertram A. Weeks (Maui)

Hospital Committee

Keith F. O. Kuhlman, Chairman
David Bronder
John H. Chalmers
Donald F. B. Char
Philip T. Chu
John F. Hanley
Wilbur S. Lummis
George Mills (Vice-Chairman)
Andrew Morgan
L. Q. Pang
Francis Oda
Verne C. Waite
S. Kasamoto (Hawaii)
Webster Boyden (Kauai)
E. B. Underwood (Maui)
Grover H. Batten (Councillor)

Indigent Medical Care Committee

Patrick J. Walsh, Chairman
John W. Devereux
H. Wm. Goebert
Keith F. O. Kuhlman
Gordon Liu (Vice-Chairman)
Robert K. Mookini
Frank H. Hatlelid
Richard K. C. Lee
R. F. Shepard
A. L. Vasconcellos
Grover H. Batten (Councillor)
Raymond T. Eklund (Hawaii)
Burt O. Wade (Kauai)
Kenneth A. Haling (Maui)

Legislative Committee

T. T. Tomita, Chairman (Councillor)
John F. Chalmers
Leo Bernstein
Clarence F. Chang
John W. Devereux
George Goto (Vice-Chairman)
Keith F. O. Kuhlman
Rowlin Lichter
P. H. Liljestrand
Edmund C. K. Lum
K. Y. Lum
George H. Mills
L. Q. Pang
B. A. Richardson
R. F. Shepard
Carolina Wong
Shoyei Yamauchi
Ed B. Helms (Hawaii)
John J. Lowrey (Honolulu)
Y. Miyashiro (Kauai)
Kenneth A. Haling (Maui)
Robert Miyamoto (Hawaii)
J. A. Burden (Maui)

Maternal and Perinatal Mortality Study Committee

Samuel J. Buist, Chairman	1967
Cora Au	1967
Mario Bautista	1965
Robert C. Bell	1967
Ann B. Catts	1967
Donald F. B. Char	1967
Robert G. Dimler (resigned)	1967
Katherine J. Edgar	1967
John Felix (deceasd)	1968
George Goto	1968
Richard K. B. Ho	1966
Robert T. S. Jim	1967
Roy M. Kaye (Vice-Chairman)	1966
John R. Kreiger	1968
Frederick S. F. Lee	1967
Paul F. McCallin	1968
James L. Mertz	1967
Arno J. Mundt	1966
William A. Myers	1968
Joseph T. Nishimoto	1967
Noboru Ogami	1967
Allan C. Oglesby	1966
Thomas K. Oshiro	1968
John M. Ohtani	1966
T. T. Tomita (Councillor)	1968
Stanley M. Saiki	1966
Richard Y. Sakimoto	1967
Calvin C. J. Sia	1967
Francis H. Soon	1967
Grant N. Stemmermann	1967
Francis M. Terada	1967
Mitsuo Tottori	1967
Theodore K. S. Tseu	1967
Garton E. Wall	1966
Rodney T. West	1967
William M. Walsh	1966
James T. S. Wong	1967
Jack S. Woodruff	1967
Henry H. L. Yim	1966
John A. Harbinson	1968
P. J. Caldwell (Hawaii)	1968
M. A. Brennecke (Kauai)	1968
W. B. Patterson (Maui)	1968

Medical Care Plans and Fees Committee

Richard D. Moore, Chairman
Grover H. Batten (Councillor)
James W. Cherry
Keith F. O. Kuhlman
Gail Li
Chew Mung Lum (HMSA Subcommittee Chairman)
George H. Mills (Fee Survey Subcommittee Chairman)
Randal A. Nishijima
Don E. Poulson
J. I. F. Reppun
Frederick B. Warshauer (Vice-Chairman)
Rodney T. West
H. E. Crawford (Hawaii)
Samuel R. Wallis (Kauai)
Wm. E. Iaconetti (Maui)

Medical Education Committee

Ralph M. Beddow (Chairman)
Grover H. Batten (Councillor)
Donald F. B. Char
Henry F. C. Fong
Robert G. Johnston
Charles Judd (resigned)
Richard T. Mamiya
George H. Nip
Satoru Nishijima
Harold M. Sexton
Rogers Lee Hill
Bernard J. B. Yim
Yutaka Yoshida
Frank L. Tabrah (Hawaii)
Webster Boyden (Kauai)
Joseph E. Andrews (Maui)

Medical Practice Act Committee

Richard D. Moore, Chairman
George Goto
Thomas P. Frissell
R. F. Shepard
B. A. Richardson
T. T. Tomita (Vice-Chairman and Councillor)
Robert Miyamoto (Hawaii)
Samuel R. Wallis (Kauai)
Joseph E. Andrews (Maui)

Medicine and Religion Committee

Sau Ki Wong, Chairman
Claude V. Caver
James W. Cherry
Duke Cho Choy
Philip T. Chu
Theresia Graumann
Tadao Hata (Vice-Chairman)
Charles Judd (resigned)
Harold G. Lawson
R. F. Shepard
Francis H. Soon
James B. H. Young
James F. Fleming (Maui)
Raymond T. Eklund (Hawaii)
Y. Miyashiro (Kauai)
Andrew C. Ivy, Jr. (Councillor)

Mental Health Committee

George F. Schnack, Chairman
Mario P. Bautista
Wm. J. T. Cody
Edward F. Furukawa
Frederick L. Giles
Bernard W. D. Fong (Councillor)
K. Y. Lum (Vice-Chairman)
Audrey Mertz
John C. Milnor
Wm. A. Myers
Don E. Poulson
J. Kendall Wallis
Charles Belcher (Hawaii)
Peter Kim (Kauai)
E. A. Tompkins (Maui)

National Legislation Committee

L. Q. Pang, Chairman
P. Howard Liljestrand (Vice-Chairman)
Robert K. Mookini, Jr.
T. T. Tomita (Councillor)
J. Alfred Burden (Maui)
Harold Lewis (Hawaii)
Marvin A. Brennecke (Kauai)

Nominating Committee

Carl B. Mason, Chairman
Keith F. O. Kuhlman
Richard S. Omura
R. F. Shepard (Vice-Chairman)
R. T. Wong
R. A. Miyamoto (Hawaii)
Burt O. Wade (Kauai)
Clifford F. Moran (Maui)

Nurses Liaison Committee

Charman Akina, Chairman
Joseph E. Andrews (Maui) (Councillor)
Roy Kaku
A. L. Vasconcellos
Verne C. Waite (Vice-Chairman)
Richard Yamauchi (Hawaii)
E. B. Underwood (Maui)
Clyde H. Ishii (Kauai)

Pension and Investment Committee

Herbert Y. H. Chinn, Chairman (Councillor)
Richard E. Ando
Homer Benson
Harold M. Johnson
I. L. Tilden
Robert T. Wong
H. Kushi (Maui)
T. T. Oto (Hawaii)
M. A. Brennecke (Kauai)

Pharmacy Committee

John F. Chalmers, Chairman
James J. Ball
Douglas B. Bell, II
Thomas Fujiwara
Daniel D. Palmer (Vice-Chairman)
T. T. Tomita (Councillor)
Warren Wong
Seiya Ohata (Maui)
George Oakley (Hawaii)
Y. Miyashiro (Kauai)

Publications Committee

Randal A. Nishijima, Chairman
Samuel D. Allison (Immediate Past-President)
O. D. Pinkerton (President)
Herbert Y. H. Chinn (Treasurer)
Harry L. Arnold, Jr. (Nonvoting), Editor
J. M. Zelko (Hawaii)
W. W. Goodhue (Kauai)
E. T. Shimokawa (Maui) deceased

Public Relations Committee

Andrew C. Ivy, Jr., Chairman
Toru Nishigaya, Vice-Chairman
Randal A. Nishijima, Secretary
Herbert Y. H. Chinn, Treasurer
Ed B. Helms, HaCMS President
H. Wm. Goebert, Jr.
John J. Lowrey, HCMS President
Y. Miyashiro, KCMS President
Kenneth Haling, MCMS President
Wm. N. Bergin, Hawaii Co. PR Chairman
Patrick Walsh, HCMS PR chairman
W. W. Goodhue, Kauai Co. PR Chairman
Milton Howell, Maui Co. PR Chairman
Harry L. Arnold, Jr., HMJ Editor
Walter Y. M. Chang, Chairman, Radio-TV Subcommittee
Thomas S. Richert, Chairman, Operation Pacific
Henry N. Yokoyama, Chairman, News Media
Wm. F. Moore, Jr., Chairman, Message of the Month
John R. Stephenson, Chairman Health Fair Committee
Shigeo Natori, Chairman, Japanese Speakers Bureau

Public Relations Subcommittee on Message of the Month

Wm. F. Moore, Jr., Chairman
Andrew C. Ivy, Jr. (Councillor)
Casimer Jasinski
Kazuo Teruya (Vice-Chairman)
T. Taniguchi (Hawaii)
W. W. Goodhue (Kauai)
Milton M. Howell (Maui)

Public Relations Subcommittee on News Media

Henry N. Yokoyama, Chairman
Gene Ahern
Andrew C. Ivy, Jr. (Councillor)

Doris Jasinski
Winfred Y. Lee
Victor Mori
Robert W. Peyton
John C. Roberts
Kazuo Teruya
Francis L. K. Won
Ghim Leong Yeoh
Keith Nesting (Hawaii)
W. W. Goodhue (Kauai)
Milton M. Howell (Maui)

Public Relations Subcommittee on Operation Pacific

Thomas H. Richert, Chairman
Edward W. Boone (Vice-Chairman)
Andrew C. Ivy, Jr. (Councillor)
Robert G. Johnston
William J. Natoli
Benjamin C. K. Tom
John R. Watson
David Jones (Hawaii)
W. W. Goodhue (Kauai)
Milton M. Howell (Maui)

Public Relations Subcommittee on TV-Radio

Walter Y. M. Chang, Chairman
Andrew C. Ivy, Jr. (Councillor)
Casimer Jasinski
R. Bruce Joseph (Vice-Chairman)
Francis T. Oda
Robert Peyton
Patrick Walsh
P. J. Caldwell (Hawaii)
W. W. Goodhue (Kauai)
Milton M. Howell (Maui)

Public Relations Subcommittee on Health Fair

John R. Stephenson, Chairman
Clifford Druecker
Andrew C. Ivy, Jr. (Councillor)
Victor Mori
Jerome Tucker (Vice-Chairman)

Public Relations Subcommittee on Japanese Speakers Bureau

Shigeo Natori, Chairman
Noboru Akagi
Andrew C. Ivy, Jr. (Councillor)
Toshihiko Kawasugi
Kyuro Okazaki
Perry Sumida
Kazushi Tanaka (Vice-Chairman)
Yoshiki Ushijima
Henry Yokoyama

Quackery Committee

William H. Sage, Chairman
Harry L. Arnold, Jr.
James J. Ball (Vice-Chairman)
Frederick A. Dodge
Andrew C. Ivy, Jr. (Councillor)
Carl E. Johnsen
William Natoli
Hideo Oshiro
Dudley S. J. Seto
Thomas Mar (Hawaii)
R. Emrick (Kauai)
John F. Sanders (Maui)

Radiation Committee

Robert A. Nordyke, Chairman
Philip A. Aruthr
Thomas C. Brown
Bernard W. D. Fong (Councillor)
Hans Graumann
George W. Henry
Robert T. S. Jim (Vice-Chairman)
Phillip J. W. Lee
Winfred Lee
Robert G. Rigler
Ghim Yeoh
G. Bracher (Hawaii)
R. Emrick (Kauai)
Frank A. St. Sure (Maui)

School Health Committee

Robert G. Dimler, Chairman
Donald C. Marshall (Vice-Chairman)
Gloria Badua
Noberto Baysa
Katherine J. Edgar
Mary A. Glover
Edmund C. K. Lum
Andrey W. Metrz
James Mertz
Calvin C. J. Sia
Betty S. M. Soo
John R. Stephenson
Patrick J. Walsh
Allan C. Oglesby
Robert Miyamoto (Hawaii) Councillor
C. H. Ishii (Kauai)
Marion Hanlon (Maui)

Scientific Program Committee

Robert P. C. Ho, Chairman
John M. Felix (Vice-Chairman) deceased
Edwin R. Ballard
Ralph M. Beddow
Walter Y. M. Chang
Fred I. Gilbert
Roy I. Iritani
Robert T. S. Jim
Robert Kim
Richard T. Mamiya
Randal A. Nishijima (Councillor)
Robert A. Nordyke
Don E. Poulson
Yasuo Takenaka
Paul Y. Tamura
Raymond Tamura
Wilmot B. Boone (Hawaii)
R. Emrick (Kauai)
Clifford C. Moran (Maui)

Tuberculosis Committee

James J. Ball, Chairman
L. Clagett Beck (Vice-Chairman)
John A. Harbinson
Wallace W. S. Loui
Robert H. Marks
Robert G. Rigler
Robert G. Weiner
R. Frederick Shepard
J. A. Mitchel (Hawaii)
Peter Kim (Kauai)
Joseph E. Andrews (Maui) (Councillor)

Water Safety Committee

Robert L. Smith, Chairman
C. M. Burgess
Wm. Kirker (resigned)
Wm. Natoli
Randal A. Nishijima (Councillor)
John M. Roberts
Luke Tajima
E. B. Helms (Hawaii)
W. W. Goodhue (Kauai)
Guy Haywood (Maui)

Woman's Auxiliary

Jerome L. Tucker, Chairman
Robert C. Bell
Andrew C. Ivy, Jr. (Councillor)
Robert Katsuki
Cora Manayan
Don E. Poulson (Vice-Chairman)
Henry B. Yuen (Hawaii)
Kenneth K. Fujii (Kauai)
M. Tofukuji (Maui)

Mabel Smyth

B. A. Richardson Dec. 31, 1966
A. S. Hartwell Dec. 31, 1965
Donald C. Marshall (alt.) ... Dec. 31, 1965

SPECIAL APPOINTMENTS

The National Foundation's Health Scholarship Committee—C. M. Burgess

Inter-Professional Coordinating—Leabert R. Fernandez, Theodore T. Tomita

Oahu Health Council—E. F. Cushnie, Unoji Goto

Advisory Committee to the Division of Mental Health—K. Y. Lum

Advisory Committee to the University of Hawaii—Bernard W. D. Fong

Medical Advisory Committee to the Department of Social Services—Clifford T. Druecker, George H. Mills, George H. Nip, Keith F. O. Kuhlman, William N. Bergin, J. Alfred Burden, Patrick M. Cockett

State Planning Committee on Mental Retardation—Duke Choy Choy

State Employees' Retirement Plan Review Board—Grover H. Batten, Thomas S. Bennett, C. M. Lum, Don Poulson

Inter-Society Science Education Council—Robert A. Nordyke

State T. B. Association Legislative Committee—Dudley S. J. Seto

Hawaii Heart Program—Coolidge S. Wakai

University of Hawaii Environmental Poison Study Committee—Richard K. B. Ho

Department of Health Radiation Advisory Committee—Robert A. Nordyke

Anti-Smoking Program—Allan C. Oglesby

PROCEEDINGS OF THE HOUSE OF DELEGATES

110th Annual Meeting of the Hawaii Medical Association

The first session of the House of Delegates of the Hawaii Medical Association was called to order by the President, O. D. Pinkerton, at 1:00 P.M., May 11, 1966, in the Mabel Smyth Auditorium, Honolulu.

Present were (officers) O. D. Pinkerton, Theodore T. Tomita, Randal A. Nishijima, Herbert Y. H. Chinn; (county presidents) John J. Lowrey, Yonemichi Miyashiro, Kenneth A. Haling; (councilors) Robert M. Miyamoto, Grover H. Batten.

(Honolulu delegates) Ralph M. Beddow, Edward W. Boone, Scott C. Brainard, Charles S. Brown, Walter Y. M. Chang, Kenneth Chinn, William W. L. Dang, Thomas P. Frissell, George Goto, Robert P. C. Ho, Robert T. S. Jim, Keith F. O. Kuhlman, Carl H. Lum, Robert K. Mookini, Richard D. Moore, J. I. F. Reppun, B. A. Richardson, R. F. Shepard, R. Varian Sloan, Coolidge S. Wakai, Robert T. Wong; (Maui delegates) Marion Hanlon, Clifford F. Moran.

Honolulu President John J. Lowrey asked that the following alternate delegates be seated to complete Honolulu County's delegation: Charles T. H. Ching for Andrew L. Morgan, Roy Iritani for Richard S. Omura, Francis T. Oda for Carolina D. Wong, Marcelino J. Avecilla for Warren L. H. Wong.

Kauai President Yonemichi Miyashiro asked that alternate delegate Marvin A. Brennecke be seated for Peter Kim.

No alternates were seated for the two absent Hawaii delegates. R. P. Wipperman was seated after the House convened.

The minutes of the April 29–May 2, 1965, meeting were approved as published.

The reports of the President, Secretary, and Treasurer as well as those of Hawaii, Honolulu, and Maui County Societies were in the Delegates' Handbook and referred as indicated. The report of the Kauai County Medical Society was circulated, read by the President, and referred to the Miscellaneous Business Reference Committee. The reports of the standing and special committees were referred to the reference committees as previously announced.

The titles and resolves of resolutions 11, 12, and 13 were read. Resolution number 11 was referred to the Reference Committee on Miscellaneous Business; resolutions numbers 12 and 13 were referred to the Reference Committee on Insurance and Medical Service.

The House recessed at 1:30 P.M. to present a program on medicare in which the following participants took part: James Z. Appel, M.D., AMA President; Mrs. Mercia Kahn, HEW Regional Representative; Sidney E. Chapin, M.D., of Detroit, home health services speaker; Wilbur S. Lummis, M.D., Hawaii Department of Health; Mr. Frazer Shipps of Aetna Insurance Company; and Messrs. Edward Yoshimura and Robert Millar of the Hawaii Department of Social Services.

• • •

The Reference Committees were in session May 12 beginning at 1:00 P.M.

• • •

The second session of the House of Delegates was called to order on Friday, May 13, 1966, at 1:00 P.M. The Secretary called the roll. The following members who had not answered to the roll on Wednesday were seated: (county presidents) Ed B. Helms; (councilors) Bernard W. D. Fong, Andrew C. Ivy, Jr. The delegates who were seated on Wednesday and who were not replaced with alternates were: Scott Brainard, Walter Y. M. Chang, Kenneth Chinn.

Dr. Richard E. Ando was appointed Parliamentarian.

The Reference Committee reports were received and reported as follows:

REFERENCE COMMITTEE ON PUBLIC HEALTH

Mr. President and members of the House of Delegates:

Your Reference Committee on Public Health met before a large audience of interested physicians and guests and received testimony on the various resolutions and reports submitted to the committee for consideration. Having heard the discussion of the witnesses and having given careful consideration to all the testimony presented to it, your Reference Committee is pleased to make the following report:

AUTOMOTIVE SAFETY

The Automotive Safety Committee has met during the past year on an average of once every six weeks. Attendance on this committee has been about 50 per cent or less.

Although we have had no specific items referred to us, we have definitely taken action in backing all of the medical legislation proposed by the Legislative Committee including seat belts, compulsory alcoholic level study for the drinking driver, and all of the driver education programs proposed.

During a greater part of the year the committee was asked to represent the Honolulu County Society in the proposal to do away with sirens on ambulances. After many discussions with the Mayor's special committee on this matter, a new code of ambulance operation was brought into being which definitely toned down not only speed but when and how sirens should be operated. A large portion of the year was taken up with revision of the driver's physical examination under the Public Utilities Commission Act. The old physical was superfluous and obsolete and a new streamlined and pertinent examination sheet is now in the hands of the Public Utilities Commission's printer and awaiting distribution.

RECOMMENDATIONS: (1) That this committee remain functioning as in the past, however limiting itself to medical aspects of traffic safety.

JAMES G. MARNIE, M.D.

Automotive Safety

Your Reference Committee first considered the report of the Automotive Safety Committee. After considerable discussion, it was decided to recommend that the entire report as submitted along with its one recommendation be approved.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

CANCER

The first item referred to the committee in 1965-66 was the status of the Cytological Detection Program. According to the latest report, 600 women have been examined at Queen's, St. Francis, and Kapiolani Hospitals. Action taken was that the Oahu Women's Cancer Detection Program for medical indigents be continued until the end of the fiscal period, and that this program should include the rural areas of Oahu and the neighboring islands.

The next item referred to the committee was a survey of local laboratories for cervical cytologic testing. It was felt that it was important to assure the Legislature that there are ample cancer detection facilities in our community. An informal survey of the cytological laboratories was done by Drs. Paul Tamura, I. L. Tilden, and Samuel D. Allison. This survey revealed that 68,000 tests were done in a recent 12-month period versus 32,000 in 1960-61.

Another item brought up was the School Health Education project on Smoking and Health. This committee went on record as endorsing the School Health Education Program and offered the services of the Hawaii Medical Association as administrator.

The last item was a report by Dr. Lumis on HCR 87 regarding State controlled cancer detection clinics. The Health Department recommended a "wait-and-see" attitude. The committee felt cancer detection clinics are not the only concern but other areas of medicine might also be involved. It was recommended that the Hawaii Medical Association should be aware of this situation and to make known to the Health Committee chairmen of the Legislature that the Medical Association is cognizant of the problem.

This has been held up pending receipt of a report from the Hawaii Cancer Commission, which has not been forthcoming. If it is received before the House of Delegates convenes, an addendum will be sent in. Two matters have been referred to the Commission recently which appear to be instances of unethical use of Hawaii Tumor Registry data without permission of the Commission; i.e. publication of an article entitled "Ethnic Differences in Cancer in Hawaii" in the March, 1966, issue of *Military Medicine* and a press release by the Health Department in the April 8, 1966, issue of the *Star-Bulletin* announcing that a five-year cancer study would be released soon.

RECOMMENDATIONS: (1) That the cytologic testing being done by the Department of Health be discontinued at the end of this fiscal year. (2) That the Hawaii Tumor Registry and Department of Health personnel be reminded that the Registry was established by a resolution passed in 1959 by the House of Delegates of the Hawaii Medical Association which states: "Resolved, that before publication, data, statistics, and scientific papers as based on registry information must receive approval of the Cancer Commission."

PHILIP S. ARTHUR, M.D.

Cancer

There was considerable discussion on this report. The committee decided after considerable deliberation to recommend the following: (1) That the first recommendation, because of its political implications, be referred to the Council of the Hawaii Medical Association; and that the second recommendation calling attention to the 1959 resolution establishing the Cancer Commission be referred back to the Cancer Committee to study its current applicability.

ACTION:

The Chairman moved adoption of this portion of the report. Dr. Batten asked to speak against the motion. He reviewed the history of the Cancer Commission and emphasized the importance of separate identity for the Commission. The Reference Committee Chairman advised that Dr. Bernstein was quite upset by the Cancer Committee's recommendation and felt that there should be further investigation before it was approved. There was prolonged discussion on the Cancer Commission and the Hawaii Tumor Registry.

It was voted that the House of Delegates of the Hawaii Medical Association remind the Department of Health of the State of Hawaii that the Hawaii Tumor Registry is in fact a function of the Hawaii Medical Association and to instruct the Department of Health to adhere to the past actions of the Association.

There was further discussion of the first recommendation. The question arose whether there were pathologists on the committee. It was pointed out that the Association had been advised that as soon as the funds were used, the St. Francis project would be closed. Instead it had spread to all the islands. It was noted that in the Reference Committee Executive Session it had been suggested to include in the report that any patient who needed cytology who could not pay for it should have it provided by a private laboratory. The Reference Committee did not feel it could impose on the private laboratories, but that the doctors should guarantee that everyone who needed the test should get it regardless of ability to pay.

It was moved that the first recommendation stated in the Cancer Committee Report be accepted by the House of Delegates. The motion was amended to include the phrase "except for those who are taken care of routinely in the outpatient departments as indigents or medical indigents." The amendment and the submotion were passed.

COMMUNICABLE DISEASE AND IMMUNIZATION AND VENEREAL DISEASE

This committee, which represents both of the spheres of communicable disease control and immunization, has met on various problems concerning the control of disease in Hawaii and has made the following suggestions and reports.

RECOMMENDATIONS: (1) That the association cooperate with the Hawaii State Health Department in the establishment of a maintenance program for the pre-school children in the State as regards the adequate immunization against diphtheria, pertussis, tetanus, poliomyelitis, smallpox, and typhoid. This not only includes well-baby clinics but also medical indigents. A member of the committee was appointed to provide liaison with the Department of Health in the field of publicity. The committee endorsed the present program of the Health Department and is in favor of the dissemination of vaccine through already established channels.

(2) That there be no recommendation at this time for changing the kinds or types of immunization procedures already in practice.

(3) That the Association wholeheartedly support the program of the American Medical Association in its attack on the control of venereal disease. A report on a Symposium on Venereal Disease Control was mailed to all the members of the Medical Association to acquaint them of the resurgence of the problem not only in Hawaii but also in the rest of the country. An educational program was endorsed which included the publication of various reports, editorials, and comments in the news media of the State. The members of the Hawaii Medical Association should be aware of the various control measures that are prevalent in the State, not only the legal aspects but the medical phases as well.

(4) That there be established a statewide committee of all interested jurisdictions which will seek ways and means of attacking this ever-growing problem of venereal disease. It is suggested that this committee be composed of representatives of the Hawaii Medical Association, the State of Hawaii (through the Health Department), the Medical Departments of the Armed Services, and the Hospital Association. The mission of this joint committee should be to determine what needs to be accomplished and the manner in which it should be done.

(5) That every physician be made aware of the venereal disease problem and that each one cooperate in the matter of control of contacts, the reporting of disease, and the maintenance of good public health principals.

No budgetary request is made by this committee.

R. VARIAN SLOAN, M.D.

Communicable Diseases and Immunization

Your Reference Committee received considerable testimony from the Department of Health in this area. On Recommendation No. 1 it was advised that rubeola be added to the list of diseases quoted in this recommendation. In addition your committee felt that rubella should be included when an acceptable vaccine is developed.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

DIABETES

This was the second year that the state committee did not directly engage in conducting the diabetes testing during National Diabetes Week. Testing was done on Oahu by the Honolulu County Committee, on Kauai by the Kauai County Committee, and on Hawaii by the Department of Health. Maui did nothing. Molokai will have a drive in May which will not be Society sponsored.

The use of Dextrostixs was evaluated and approved by this committee. Honolulu County used this testing method exclusively in its 1965 drive.

As of the date of this report, the following are the results of screening tests by counties:

County	Number of People Screened	Number of Positives
Hawaii	3,978	303
Honolulu	3,113*	394
"	3,540**	738
Kauai	2,300	183

* By the Department of Health using the Clinitron
** By the Honolulu County Medical Society using Dextrostixs

In Honolulu County 80 of the screenees were found to be true diabetics. The unusually high number of screened positives resulting from testing done by the Honolulu County Medical Society, according to Chairman Winfred Lee, was due to poor technician experience, especially in one rural area, and poor patient preparation. The ease of conducting a drive using Dextrostix testing far outweighs this deficiency.

It was learned that the Department of Health will no longer use the Clinitron but will use Dextrostix because Clinitron reagents are no longer being manufactured and the Clinitron will become obsolete.

As a part of the educational drive for doctors, this committee wrote to major hospitals in the Islands and urged that a Professional program for Diabetes Week be conducted by each hospital. A few hospitals responded. The lay education program included press releases, TV programs, and the Message of the Month.

RECOMMENDATIONS: (1) This committee had a budget of $300 which was not used because expenses were met by the American Diabetes Association, certain pharmaceutical companies, voluntary help, and the Department of Health. Because this financial help is not guaranteed in the future, we would recommend a budget of $300 for next year. (2) That Dextrostixs be used for all diabetes screening programs. (3) That next year's committee endeavor to further doctor education in the field of diagnosis and treatment of diabetes. Considerable apathy exists; knowledge has been accumulated rapidly but it doesn't reach many physicians. Efforts made by this committee to stimulate the profession were discouraging. May our successors do better.

CHARLES S. BROWN, M.D.

Diabetes

Your Reference Committee had considerable discussion on this report. There was not a unanimous vote; however, the majority felt that the entire report should be accepted with the deletion of the request for $300. A minority report will be entered by Dr. Charles S. Brown.

MINORITY REPORT

I feel that the Diabetes Committee should have the $300 budget requested. Even though it hasn't been used in the past there may arise some condition in the future where the money would be necessary to carry out the diabetes detection drive.

Mr. President, I recommend approval of this minority report in place of that portion of the majority report of the Reference Committee on Public Health which relates to the Diabetes Committee.

ACTION:

Diabetes mortality and morbidity statistics were presented and a plea was entered for the restoration of a budget to be used in the event trust and American Diabetes Association funds do not become available.

It was voted to adopt the minority report.

EXAMINING BOARD FOR HANSEN'S DISEASE

There were a total of twenty new cases of Hansen's Disease for the calendar year of 1965.

Compared to the past years that I have served on the Board, this has been the largest number of new cases.

W. H. KURASHIGE, M.D.

Examining Board for Hansen's Disease

Your Committee recommends acceptance of this report with no change.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

HEART

This committee has maintained a good working relationship with the State Department of Health and the Hawaii Heart Association during the past year.

In the successful Health Fair of 1965, Dr. Edward B. Payne of the Chronic Disease Branch of the Department of Health reported that six-lead electrocardiograms and blood pressures were taken in the "Cardiac Screening Survey." He asked the committee's opinion in the preparation of reports of these ECGs to the patient and physician. Dr. Payne also asked the committee to make recommendations relative to reporting blood pressure readings made at the Health Fair.

This committee recommended that any ECG interpreted as being not normal to any degree be reported to the physician and that the patient be urged to see his physician for further clarification about the ECG reading. The committee also recommended that a diastolic blood pressure over 90 be reported. In order to allay apprehension, it was recommended that in the report to the patient the letter should state that "the screening test showed an abnormality which may or may not be significant. A definite diagnosis cannot be made without detailed examination which your own doctor can do for you. We urge you to see him at your earliest opportunity."

HCR No. 87 adopted by the last session of the Legislature mandated the Department of Health to study and determine the necessity and feasibility of establishing and operating State disease detection and prevention clinics for diseases "which take a heavy toll of human life." Dr. Leo Bernstein requested the assistance of the HMA in implementing this resolution. This committee felt that the outpatient clinics in Honolulu are well-staffed and that the money required for this study could be used more profitably for research, and also for treating these diseases in the existing clinics.

The Hawaii Heart Association Committee on Cardiovascular Clinics prepared a pamphlet on Minimum Standards for Certification of CVD Clinics in Hawaii for this committee to review. A subcommittee is presently studying the details and its applicability to the existing clinics.

The Hawaii Dietetic Association Diet Therapy Committee prepared a "High Polyunsaturated Fat, Low Cholesterol Diet" based on diets printed by the American Heart Association. This committee was asked to review and comment on this diet which is available for patient instruction in the hospitals and in the physicians' offices. It also includes references to our local foods. This committee reviewed and approved this diet.

The subject of "Coronary Care Units" was initiated by this committee for consideration in our local hospitals in view of its contributions as reported in the recent medical journals and medical conventions. Intensive care units are now in operation in the three general hospitals in Honolulu. With the rising incidence of heart diseases and mortality, the subject of the CCU was discussed in two meetings. An unofficial count of the total cardiac admissions to a local general hospital during a six-month period in 1965 was about 205 patients. These included acute infarction, ASHD, and congestive heart failure. During this same six-month period only about 37 cardiacs were admitted to the Intensive Care Unit. Recommendation: Further study is necessary on the above data before any recommendation can be made to the local hospitals as to the advisability of establishing a Coronary Care Unit at this time.

RECOMMENDATIONS: (1) That the committee continue to study both CVD clinic standards and coronary care units. (2) That the committee continue its liaison work with the State Department of Health, Hawaii Heart Association, and other agencies interested in cardiovascular diseases.

COOLIDGE S. WAKAI, M.D.

Heart

Your Reference Committee went over this report and after full discussion it was agreed to recommend acceptance of the entire report, including all its recommendations.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

MATERNAL & PERINATAL MORTALITY STUDY

The subcommittee on Perinatal Mortality met at monthly intervals to consider perinatal deaths for study. Information obtained from the birth and death certificates of infants made it possible to select cases for analysis. After detailed discussion, decision is made as to whether or not the case is suitable for referral to the study committee. Of the 28 cases reviewed, six were taken to the study committee for detailed discussion and educational purposes.

The over-all committee studied in detail five maternal deaths for 1965. One of the deaths was considered accidental because it was secondary to injuries sustained in an automobile. Two of the deaths were indirectly obstetrical and considered not preventable. Two of them were directly obstetrical, one possibly preventable, and one preventable. Information regarding these studies was properly disseminated.

A special meeting was held in September in association with the Maternal and Child Health Branch of the Department of Health of the State of Hawaii. At this time the committee acted in an advisory capacity in regard to family planning programs. The recommendation was to approve the proposed policy statement of the Department of Health.

A study was also made on the standard of care of newborns in the State relevant to exchange blood transfusions.

Discussions were held regarding inadequate City and County ambulance service in the Leeward area. The committee supported a petition requesting the City and County Physician's Office to direct all ambulances to honor the request of the attending physicians in transporting patients to the desired hospital.

Support was also given to a PKU screening program which was made mandatory by Act 19, House Bill 881 of 1965.

RECOMMENDATIONS: (1) We would like to request the yearly appropriation of approximately $300 for this committee to travel to the counties of Kauai, Maui, and Hawaii for conferences on medical care in obstetrics and pediatrics.

SAMUEL J. BUIST, M.D.

Maternal and Perinatal Mortality

Your Reference Committee went over this report quite thoroughly. After much discussion, the committee agreed to recommend acceptance of the report and to congratulate the committee on doing a fine job. However, we did not feel that the request for an appropriation of $300 should be approved.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

MENTAL HEALTH

At the first meeting June 22, 1965, although the House of Delegates had not approved this Committee's request to administer the grant it requested from NIMH for courses in aspects of psychiatry for other physicians, this task was referred after receipt of some $3,000 from NIMH. It was decided to send to each of the specialty societies letters offering courses tailored to their needs. This was subsequently done without response. Later an announcement was put in the Newsletter and two courses are now getting under way.

A matter concerning salaries for psychiatrists was also referred at the first meeting, and it was recommended that HMA write Governor Burns and Dr. Bernstein urging salary increases to the maximum possible under conditions set by the Legislature. Before the next meeting, an invitation from the Mental Health Division to participate in the State Grants-in-Aid-of-mental-health programs was referred, and an informal decision was made that the Committee would not have time to develop and then run a full-scale program of services or public education. At the same time Dr. Pinkerton requested a review of emergency commitment legislation to determine whether there were incorporated safeguards against possible liability arising from suits by patients for confinement. Dr. Pinkerton was informed that the fact that the possibility of such suits on the theory of malpractice did exist was a major reason the Legislature enacted the law.

A report on the activities of the Committee was required and submitted so as to conform with HCR No. 87 concerning possible establishment of state disease detection and prevention clinics. A report on current status of both comprehensive mental health and community mental health centers plans, specific legislative proposals, and new programs was requested by the AMA Department of Mental Health in preparation for the 12th Annual Conference of State Mental Health Representatives.

In March, 1966, your Chairman attended this very edifying conference and submitted a detailed report with recommendations arising out of information and action of that meeting.

Also referred to the Committee was a request for a study of the 200+ page Comprehensive State Mental Health Plan; a summary and evaluation was submitted. HMA Council requested a study of community mental health programs being developed in Hawaii for the indigent in view of the AMA plan to appoint a committee to assist in establishment of medically sound programs, to identify existing programs, and to conduct on-the-spot surveys. As this plan related especially to Community Mental Health Centers it was believed that the letter earlier written to the AMA Dept. of Mental Health and the summary of the Comprehensive State Plan sufficed; new programs for Centers are barely getting off the ground at Queen's and St. Francis and in the Mental Health Division.

Members of the Committee continued to completion their responsibilities in various phases of the Comprehensive State Planning, and a summary of the new United Automobile Workers insurance plan with coverage for mental illness and a brief statistical study of psychiatric usage under other insurance plans with partial coverage for mental illness were forwarded to HMSA

and Mr. Hager. The Committee at its second meeting February 16, 1966 (earlier meetings failed for lack of attendance and over-full schedules of Committee members) asked the Council for approval of entering discussions over a long period with the Hawaii Psychiatric Society and the Dept. of Health about policies on intake and release of patients at the Hawaii State Hospital. We anticipate momentarily the formation with Hawaii Psychiatric Society and Hawaii Academy of General Practice of a Steering Committee in Mental Health to be concerned with training and coordination of MH programs in the state.

RECOMMENDATIONS: Recommendations for the next year's program are numerous and involve both action by the House of Delegates and the Council, and increased activity by the Mental Health Committee. Consequently, the first recommendation is a repetition of one submitted in prior years: (1) That the Mental Health Committee include a wider representation of nonpsychiatrist physicians who will make strenuous efforts to attend called meetings of the Committee and include the chairman of the HAGP's Mental Health Committee. The second recommendation is almost as broad: (2) That the Committee continue with programs in progress, including: (a) participation in, and stimulation of, development of new insurance programs involving coverage of mental illness or its prevention, (b) improving salaries of psychiatrists in government employment, (c) organization and administration of courses in psychiatry for other medical specialists, (d) discussion with the psychiatric society and State on policies on admission and discharge of patients at the State Hospital, and (e) participation in a Steering Committee on Mental Health with HPS and HAGP.

A number of recommendations are for approval of new programs to be initiated by the Mental Health Committee: (3) That it investigate possible programs to interest and recruit capable young people into psychiatry and other mental health professions and assist the HMA to incorporate such as are appropriate into its Doctors' Day. (4) That it undertake to develop a leadership role in training of nonpsychiatrist physicians in such Community Mental Health Centers as become established. (5) That it effect consultative and cooperative relations with the State Office of Economic Opportunity, EOA programs, and the Honolulu Council of Social Agencies in its role with CAP programs.

The remainder of recommendations are for action by HMA, either directly or by delegation to the Mental Health Committee: (6) That HMA urge physicians to become members of Area Councils for EOA Community Action Projects (CAP). (7) That HMA apply its greatest abilities to get more representation on the Advisory Committee for Mental Health Centers, to include not only a person with authority to speak for HMA, such as the President, but at least one other who is conversant with the special problems involved in operation of such centers and the viewpoints of AMA, HMA, and psychiatric physicians; (8) That HMA enter into discussions with the Department of Health and with prospective private applicants for Community Mental Health Centers to the end that HMA become the independent body to control the quality of services provided by physicians in such Centers, including reviewing the competence of physicians and policing for ethical conduct. (9) That HMA participate in the proposed Western Regional AMA Congress on Mental Health to be co-sponsored by roughly eight western state medical associations.

Recommendation No. 10 is that a copy of the report on the "Twelfth Annual Conference of Mental Health Representatives of State Medical Associations" be sent to the following: (a) Dr. Leo Bernstein, (b) Mrs. Sylvia Levy, (c) Dr. Satoru Izutsu, (d) Mr. Wayne Omuro, (e) Mr. Lee Wheeler, (f) Dr. Robert Browne, (g) Sister Maureen, (h) Mr. Will Henderson, (i) Mr. Joseph R. Veltmann, (j) Dr. Wilbur Lummis, (k) Dr. Linus Pauling, Jr., (l) Dr. Masato Hasegawa, (m) Mr. Albert Yuen, (n) Mr. Richard E. Hager, (o) Mr. Frederick Lee, (p) Rev. David Harada, (q) Mrs. Molly Ellis, (r) All psychiatrists in private practice, (s) Dr. Ellis Devereux, (t) Mr. Thomas Gill, (u) Mr. Walter Chun, (v) Dr. Walter Wolman, (w) All members of the Mental Health Planning Advisory Committee, (x) All members of the advisory committee on Mental Health Centers, and (y) the entire HMA membership.

The final recommendation requires a budgetary request for funds sufficient for the HMA member on the Regional Steering Committee (the MH Committee Chairman) to carry out his responsibilities in the planning and organization of the Regional Congress. (11) That the HMA budget in the neighborhood of $900, to include three trips to the mainland between the present and late 1967. If the House of Delegates is agreeable to committing such funds, one further recommendation is appropriate: (12) That HMA invite the Western Region to hold its Congress in Hawaii, suggesting that its Regional Steering Committee member be a Co-chairman of the Congress. (If such an invitation were accepted by the Western Region State Medical Associations it might well reduce the costs estimated in recommendation #11 by one-third.)

GEORGE SCHNACK, M.D.

Mental Health

Your Reference Committee had a very prolonged discussion on this report. All recommendations were discussed thoroughly. There were some objections to recommendations Nos. 7 and 8 on the basis that they might be premature. However, after a thorough discussion the committee decided to recommend acceptance of the entire report with the following exception: (1) That we delete part (b) of recommendation No. 2; and (2) we delete the request for $900. Your Reference Committee would like to congratulate this committee on its excellent report and recommendations.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

President's Report, Items 1, 3, 4, 7, 11, 12, 13

Your Reference Committee went over the President's Report and as far as Items Nos. 1, 3, and 7 are concerned, we recommend that these doctors continue in their present capacity. On Item No. 4, the State Planning Committee on Mental Retardation is not in existence any more. This committee has been substituted by the Governor's Interim Coordinative Committee on Mental Retardation. All physician members are now appointed by the Governor of the State of Hawaii. We recommend that further efforts be made to obtain reports to appointees on Items 11, 12, and 13.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

RADIATION

The Radiation Committee did not meet during the past year. No items were referred to it or initiated by it. We have been observing with interest the large study of dental x-ray units which has recently been finished by the Department of Health in conjunction with the U. S. Public Health Service. No clear evidence of radiation hazard was found in the dental equipment. However, changes in collimation were suggested in about 50%. These carried out to improve the radiation safety factors. A similar study of medical x-ray and radioisotope units is presently under consideration, and will probably be carried out in the coming year by this committee and the Department of Health.

The question of whether the State of Hawaii should take over the present U. S. Atomic Energy Commission

licensing function for the use of radioactive isotopes within the State has been under consideration. Experiences of other States which have done this suggests that it may be too costly an undertaking at present.

The Committee has no recommendations or budgetary requests at this time.

ROBERT A. NORDYKE, M.D.

Radiation

Your Reference Committee considered this report. There were no recommendations or budgetary requests. We recommend the report be accepted.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

SCHOOL HEALTH

The School Health Committee concentrated on two items: (1) School physical examinations on an annual basis, these annual examinations to be deemed sufficient for all competitive sports. (2) Public school system health coordinators. The committee has been trying to develop a job description for this work.

A mixed meeting was held which included various interested peoples of Honolulu and it was learned that item No. 2 is now under study by the Department of Education.

Dr. Stephenson has been working hard on a unified form for all required physicals, including school, Boy Scouts, summer camps, etc. His report follows:

At the present time there are in this state many different physical examination forms being used for our school-age children. Each private voluntary agency, such as the Boy Scouts and the YMCA, and most of the private schools, have their own special form. Public schools use a form redesigned several years ago as a school health form. In addition, they have another one for ROTC and another one for interscholastic athletics. It is quite common for one patient to be required to have several different forms filled out during the course of one school year.

The plethora of forms and the great volume of patients requiring these examinations, particularly during the summer months, causes a great stress on the doctor's facilities, both physical and personal. The burden has become so great that in order to retain the quality of physical examinations some changes in the procedure must be effected.

In general there are two steps which would lead to lessening of this load and maintaining or increasing the value of these examinations. A major step would be to have the examinations spread out through the entire calendar year, and this has been recommended by the medical profession for the last couple of years. It has been suggested that the schools permit and encourage birthday-month examinations as being acceptable evidence of physical fitness for most programs during the ensuing year. The effect of this birthday-month physical examination program was very greatly noticed during the last year when our summer load was noticeably lighter. This must be continued by and promoted by physicians and schools. Another major step would be the development of a unified physical examination form which would be acceptable to most agencies requiring examinations. This, I believe, we have come very close to doing. As a result of several years' study and nearly 50 revisions a form is now available. It is proposed as a national form for the Boy Scouts of America. One of the obvious advantages of the use of a unified form such as this would be the ease with which multiple copies could be supplied without re-examination by the physician to the patient for his multiple requirements. Ideally, the information summarized in the bottom section which the patient carries with him would be adequate for most agency needs, although it is recognized that some agencies are required to have on hand a copy of the medical examination. Another less obvious advantage is that the form calls for a more complete history and physical examination than any of the forms currently used and in this way, the patient is encouraged to get better evaluations. There are other less important advantages, but the overriding premise is that this is a great step forward in the whole program to provide better periodic examinations and preventive medical care.

This form has been considered and accepted and endorsed by the Honolulu Pediatric Society and the Oahu Health Council. I have met with many organizations and encouraged their adoption of this form as their official form. To date, no organization and no school approached has declined. The following organizations will use this on a trial basis for the next two years: Boy Scouts of America, Girl Scouts of America, Camp Fire Girls, YMCA, YWCA, Palama Settlement, Salvation Army, all Roman Catholic Schools, St. Andrew's Priory, Iolani School, and Island Paradise School. Other schools are in the process of being informed. The Mormon Church submitted it to their national headquarters and approval was given. The program has not yet been extended to the neighbor islands.

After two years have expired, the form will be modified to meet any deficiencies that become apparent, and a Hawaii unified form will be proposed, hopefully acceptable to all schools and organizations.

The Boy Scouts of America has paid for 22,000 forms which will be available for use by all organizations.

RECOMMENDATIONS: (1) That the Hawaii Medical Association reaffirm the principle of birthday-month physicals for all school programs. (2) That the Hawaii Medical Association reaffirm its support of reestablishing health coordinators in all schools. (3) That the form discussed in the report from Dr. Stephenson be approved for uses as indicated.

ROBERT G. DIMLER, M.D.

School Health

Your Reference Committee considered this report. There was considerable discussion on all recommendations, and your committee unanimously concluded to recommend approval of the entire report and all three recommendations.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

TUBERCULOSIS

Last year the House of Delegates asked that the committee continue to develop better avenues of communications so that deficiencies in the outpatient treatment of tuberculosis can be improved and to continue to try to work with Leahi to try to develop some arrangement that would be more satisfactory to the private physicians. The House felt that treatment of nontuberculosis illnesses by Leahi's consultative staff should be discouraged.

To carry out these instructions, Dr. Maurice Brodsky was asked to attend a meeting, which was held at Lanakila Health Center where a random sample of their x-rays were reviewed. Dr. Brodsky advised that one cannot tell from an ex-ray if a patient is negative or positive and so he is hospitalized until the bacteriological tests are completed. This usually takes from five to six weeks. They are hopeful of being able to use a new rapid culture medium which may prove to give reliable results within two to three weeks. In response to the question whether some of these patients might be treated on an outpatient basis while awaiting the outcome of their bacteriological tests, the committee was advised that since some patients are lax in taking their INH if they are not supervised, most, if not all, should undergo an initial hospitalization period. This hospitalization has many purposes including provision of a better melieu for informing the patients of their disease and its treatment. No definite guidelines were formulated for hospitalization or outpatient treatment.

At the second meeting the forms used by Lanakila were reviewed. Dr. Marks assured the committee that each form used was necessary for the operation at Lanakila. The committee did ask that the wording of a sentence on one form be changed from "There is no indication of any abnormality in your lungs. However, it does appear that there might be some enlargement of your heart . . ." to ". . . However, it does appear that there might be some abnormality of your heart." This suggestion was called to the attention of the Heart Committee.

RECOMMENDATIONS: (1) That next year's committee again review with Leahi their hospitalization program. (2) That further discussions be held relative to the treatment of nontuberculosis diseases in tuberculosis hospitals. (3) That the House confirm the committee's recommendation to Mr. Dave Bowers that it not become involved in cases of emphysema but remain interested only in communicable pulmonary diseases.

JAMES J. BALL, M.D.

Tuberculosis

Your Reference Committee heard considerable discussion from witnesses present on this report. Your committee recommends that all three recommendations be approved.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

WATER SAFETY

The following is a list of the items referred to the committee and the report on actions taken.

The Fire Department of the City and County of Honolulu requested assistance in teaching resuscitating techniques and the use of mechanical resuscitators specifically to the men in the rescue squads of the Fire Department. This program is being instituted by Drs. Naomitsu Tajima and John Roberts at the present time.

The Department of Education asked for an evaluation of a portable oxygen tank and mask for use in resuscitation, a unit which they were interested in purchasing. This unit was examined and not recommended.

Mr. William R. Norwood, Chairman of Governor Burns' Shark Advisory Committee, requested appointment of Dr. Robert L. Smith to the ad hoc Shark Control Committee. This appointment was accepted. The committee investigated the shark problem by evaluating all information and data available on the subject, and formulated suitable recommendations; i.e., that a shark control program be instituted in the form of a systematic fishing program. The program was ultimately defeated in the Legislature and the committee is on call for further recommendations.

The following is a compilation of the projects, programs, or discussions initiated by the committee and the report on action taken.

A discussion on the compilation of statistical data on water accidents was initiated by the committee with a meeting with representatives from the Fire Department, Police Department, Red Cross, Hawaii Surfing Association, and Hawaii Life Guards. It was found that there was no source of data in the community from which statistics on water accidents could be compiled. A discussion of data processing ensued but none of the agencies mentioned desired to become involved.

There was a report from Norman Frank, Director of the Red Cross Water Safety Program, regarding the availability of films and demonstrations to the community in water safety techniques.

Wallet-sized cards with instructions for mouth-to-mouth breathing were distributed to surfing and diving clubs.

Dr. Tajima wrote a message on "Resuscitation."

Legislative studies included: HR 65 (Beach Alarm System) A beach alarm system was felt to be of value because it sometimes takes considerable time for the rescue squad to be notified of an accident, especially in a remote beach area. The committee concurred and voted to approve HR 65. HB 777 (Shark Hunting) This bill was for an Act making an appropriation for shark hunting activities. It was voted to support HB 777.

Swimming and surfing safety matters included a discussion of the areas of greatest need for life guard protection and zoning of surfboards. It was determined that there are two areas where surfboards should be zoned, (1) Makapuu and (2) Kailua, and that the areas of greatest need for life guard protection would be Makapuu, Kailua, Laniakea, Haleiwa, Sunset Beach, and Waimea Bay. It appeared that life guard legislation was virtually impossible because of insufficient funds.

RECOMMENDATIONS: It is recommended that the following resolution be adopted.

WHEREAS, The miles and miles of beaches on Oahu are used extensively by thousands of tourists, service personnel, and local residents (young and old); and

WHEREAS, Many tragedies have occurred due to the inability to call for aid, and almost complete lack of provision of life guard protection; and

WHEREAS, These tragedies could be minimized if there were life guard protection in key areas; be it therefore

Resolved, That the Legislative Committee of the Hawaii Medical Association take action to obtain an adequate budget for a State life guard program.

ROBERT L. SMITH, M.D.

Water Safety

After thorough discussion of this fine report, your Reference Committee recommends the entire report be approved.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

RESOLUTION NO. 9

Re: Physician Attendance at
High School Football Games

WHEREAS, For many years, high school football in Hawaii has been a major sport; and

WHEREAS, An increasing number of teenagers are participating in this sport; and

WHEREAS, There is a high incidence of injuries in the age group participating in this sport and, in some cases, even death has resulted; and

WHEREAS, All interscholastic football games played on the Island of Oahu have a physician in attendance; and

WHEREAS, The Hawaii Medical Association is vitally interested in the prevention of unnecessary accidents and death; now therefore be it

Resolved, That the Hawaii Medical Association request the Department of Education of the State of Hawaii to make it mandatory that a licensed physician be in attendance at all interscholastic football games in all the counties in the State of Hawaii; and be it further

Resolved, That if no funds are available for this service, that the county medical societies provide a physician from the area and arrangements be made for payment of this service on a basis equitable to both parties; and be it further

Resolved, That copies of this resolution be forwarded to Mr. Lowell Jackson, Superintendent of the Department of Education; to Mr. Edwin Honda, Chairman of the Board of Education; to Dr. Leo Bernstein, Director of the Department of Health; and to Governor John A. Burns, Governor of Hawaii.

Submitted by GEORGE H. MILLS, M.D.

Resolution No. 9 Re High School Football

Your Reference Committee recommends the revision of Resolution No. 9 as follows:

WHEREAS, For many years, high school football in Hawaii has been a major sport; and

WHEREAS, An increasing number of teenagers are participating in this sport; and

WHEREAS, There is a high incidence of injuries in the age group participating in this sport and, in some cases, even death has resulted; and

WHEREAS, All interscholastic football games played on the Island of Oahu have a physician in attendance; and

WHEREAS, The Hawaii Medical Association is vitally interested in the prevention of unnecessary accidents and death; now therefore be it

Resolved, That the Hawaii Medical Association request the Department of Educaiton of the State of Hawaii to make it mandatory that a licensed physician be in attendance at all interscholastic football games in all the counties in the State of Hawaii; and be it further

Resolved, That copies of this resolution be forwarded to the Superintendent of the Department of Education, the Chairman of the Board of Education, the Director of the Department of Health, and the Governor of Hawaii.

ACTION:

The Chairman moved that the resolution be adopted with the recommended revisions. It was voted to adopt the resolution as revised.

RESOLUTION NO. 10

Re: Relationship between Cigarette Smoking, Lung Cancer, and Coronary Artery Disease

WHEREAS, The Hawaii Medical Association represents the medical profession of the State of Hawaii; and

WHEREAS, This Association is aware of its responsibility to the citizens of the State of Hawaii; and

WHEREAS, There is mounting evidence of a direct causal relationship between cigarette smoking and lung cancer; and

WHEREAS, There is a strong statistical association between cigarette smoking and illness and death from coronary artery disease; and

WHEREAS, There has been over a 100 per cent increase in the incidence and mortality of lung cancer in men in the past ten years; and

WHEREAS, Death rates from coronary artery disease in middle aged men are from 50 to 150 per cent higher among heavy cigarette smokers than among those who do not smoke; now therefore be it

Resolved, That the Hawaii Medical Association, aware of its duty to alert the citizens of Hawaii to public health hazards, reaffirm and strengthen its previous position relative to the causal relationship between cigarette smoking and lung cancer, and the strong statistical association between heavy cigarette smoking and coronary artery disease; and be it further

Resolved, That the Hawaii Medical Association encourage schools in their education programs regarding the relationship of cigarette smoking to these two serious health hazards; and be it further

Resolved, That this Association actively participate in public and patient education programs to reach adults and children on this serious public health problem.

Submitted by ALLAN C. OGLESBY, M.D.

Resolution No. 10 Re Cigarettes and Cancer

After much discussion your Reference Committee felt that the entire resolution should be accepted as presented.

ACTION:

The Chairman moved that the resolution be adopted. It was adopted.

It was voted to adopt the report as a whole as amended.

REFERENCE COMMITTEE ON PARLIAMENTARY AFFAIRS

Mr. President and Members of the House of Delegates:

Your Reference Committee on Parliamentary Affairs gave careful consideration to the matters referred to it and makes the following report:

ARRANGEMENTS

The usual number of meetings were held, and the program developed with more-than-customary assistance from the Scientific Program Committee Chairman, Dr. Robert P. C. Ho.

Scientific Program Committee: A number of departures from the usual format have been developed, many of them at the request of the sponsor. Last year's suggestion to broaden the scope of the scientific portion has been heeded and an excellent program has been developed. Among the departures is the showing of scientific films following each morning session. The neighbor island doctors have several times requested longer programs and it is hoped they will be able to take advantage of this feature. The entire cost of this project is being paid for by Geigy.

Registration Fee: The sponsor requested that military physicians have their registration fees waived. The Council agreed to do this.

Exhibits: Because of the change in the meeting hall arrangements requested by the sponsor, the Scientific Program chairman, Dr. Robert P. C. Ho, volunteered to work with the exhibitors. The charge of $150.00 a booth remains unchanged even though the cost to the Association was increased. There have been some complaints from the exhibitors relative to the change and the present layout, and to the program which was printed by the sponsor and does not contain the names of the exhibitors.

Banquet: In response to the post card survey, a second luau has been planned. Arrangements for the catering and entertainment were taken on by Dr. George H. Mills who was added to the committee. Cocktails, wine, and other beverages for this event will be supplied by Geigy.

Golf: It becomes increasingly difficult to arrange for Sunday tournaments. This year Waialae agreed to have the play but in order to assure an early starting time each foursome must contain a minimum of two Waialae members. Other foursomes will not be able to start until after 9:30 a.m. Oahu agreed to handle the tournament but foursomes without Oahu members would have had to tee off prior to 7:15. The return of postcards indicated that 78 golfers would participate—14 nonhandicappers, 22 Waialae members, and 42 other handicappers. All play will be at Waialae. Only handicaps established at clubs approved by USGA will be acceptable. Waialae will serve breakfast at $2.75, including tax, beginning at 6:30 a.m.

Tennis: There has been some difficulty in trying to develop a satisfactory handicap system for this event. It is hoped that this year's attempt at ceding will result in an acceptable system. If participants wish. a steak breakfast will be served at the Oahu Country Club from 7:00 a.m. on. The cost will be $2.25, including tax.

Fishing: The first fishing tournament will take place on four boats, one of which will leave from Heeia.

Prizes and Trophies: Letters have gone out soliciting prizes. In addition the golfers' entrance fee was increased to provide cash for buying prizes. The letters noted that there were three contests and the donor should indicate which one his prize was for. There has been some questioning of this policy because donors do not want to appear to favor any one group. The entrance fee for the tennis tournament includes money for prizes, but the fishing tournament entrance fee does not. The chairman of the fishing tournament plans to collect from the participants himself.

The Pathologists Laboratory has indicated it will donate a major trophy.

The President's Award has traditionally been bought out of the President's personal funds. This custom has

been questioned in the past and with the addition of other tournaments, it could present a problem in the future, probably after the difficulties the tennis participants are having in setting standards for picking winners are solved.

Picnic: This year the picnic will be held at the Royal Place home of Dr. William Walsh. In the past the cost of this event has exceeded the income and so the price was increased. Draft beer will be served. Prizes for tennis and golf will be awarded at this time. Prizes for the fishing tourney will be kept in the HMA offices and winners instructed to pick them up.

Hobby Show: For the second time, space will be made available for doctors who wish to display their hobbies. No prizes will be offered.

RECOMMENDATIONS: (1) That the registration fees be returned to former level—$15.00 for members and $35.00 for nonmembers. (2) That waiver of registration fees be restricted to those people whose fees have traditionally been waived; i.e. nonmember guest speakers, paramedical and lay personnel, interns and residents attached to Hawaii hospitals, and the Editor of the JOURNAL. (3) That a subcommittee chairman in charge of golf be appointed immediately after the annual meeting and that he be charged with selecting and arranging for the course(s) to be used in the 1967 meeting as soon as practicable after his appointment and before the first meeting of the Arrangements Committee. (4) That the Council be asked to discuss the President's trophy and come up with recommendations for the guidance of next year's Arrangements Committee. (5) That inasmuch as the postcard survey indicated that a change in the Saturday night function be considered after the second luau, the next Arrangements Committee should review the wishes of the membership before making a decision for 1967.

E. R. BALLARD, M.D.

Arrangements

Your Reference Committee first considered the report of the Arrangements Committee and recommends acceptance of this report with the following revisions of the committee's recommendations:

(1) This recommendation that the registration fees be returned to former level, $15 for members and $35 for nonmembers, be rejected.

(2) This recommendation regarding waiver of registration fees be not accepted because this is covered in the Constitution and Bylaws which provides that the Secretary may issue a guest card to "physicians who under certain circumstances have had their registration fee waived by the Council. This card shall be held only for the Annual Session for which it is issued and shall not entitle the holder to attend any meetings of the House of Delegates."

Your Reference Committee recommends acceptance of Recommendations Nos. 3, 4, and 5.

Your Reference Committee notes the efficient efforts of the Arrangement Committee in carrying out its assignments and commends the chairman of this committee for his good work.

ACTION:

The Chairman moved adoption of this portion of the report. After it was explained that the recommended registration fees were rejected because of an alternate proposal which is dealt with later in the report, it was adopted.

BYLAWS AND PARLIAMENTARY

In accordance with instructions issued by the House of Delegates, this committee has developed definitions for each of the Association's committees and recommends that they be incorporated into Chapter VIII and that this Chapter be changed to read as follows:

Chapter VIII—Committees

Section 1. Standing Committees. All permanent appointive committees of the Association shall be known as Standing Committees. They shall serve in an advisory capacity to the State Department of Health or other agency or person when called to do so by the President or House of Delegates. (a) These committees and their functions are as follows:

(1) AMA Education and Research Foundation Committee shall disseminate information and encourage physicians, other individuals, and groups to contribute to medical schools and research through the AMA-ERF.

(2) Arrangements Committee shall organize all aspects of the Annual Meeting except the Scientific Program. The chairman of the Scientific Program Committee and the Secretary shall be ex officio. It shall provide suitable accommodations for the meeting places of the Association, of the House of Delegates, and of their respective committees. Its chairman shall report an outline of the arrangements to the Secretary for publication in the program and shall make additional announcements during the session as occasion may require. It shall publish the registration fees as recommended by the Treasurer and approved by the House of Delegates. Members of this committee shall serve for three years, one-third to be appointed each year.

(3) Automotive Safety Committee shall study legislation pertaining to the health aspects of automotive safety and make its recommendations to the Legislative Committee. It shall work with other traffic safety committees, assist the Public Utilities Commission on physical examination standards for drivers, and shall keep the Legislative Committee informed of legislative proposals on which the Association may take a position.

(4) Awards Committee shall recommend to the Association and other organizations the names of physicians to be honored for outstanding services and abilities.

(5) Bylaws and Parliamentary Committee shall study and make appropriate recommendations for changes in the Bylaws, and advise the officers on matters of parliamentary procedure.

(6) Cancer Committee shall be concerned with all matters relating to cancer control programs, consult with agencies such as the American Cancer Society, advise and supervise the Hawaii Cancer Commission and its Tumor Registry, and shall receive an annual report from that Commission for transmittal to the House of Delegates.

(7) Careers Committee shall conduct projects such as the Careers Day Program to encourage students to seek careers in the medical and paramedical fields.

(8) Chronic Illness and Aging Committee shall endeavor to stimulate the community to elevate the quality of care of patients with chronic diseases and problems associated with the aged through prevention, detection, and rehabilitation.

(9) Communicable Disease and Immunization Committee shall evaluate public health immunization programs and investigate the safety and effectiveness of various vaccines. It shall disseminate pertinent information as needed in the best interests of public health.

(10) Crippled Children Committee shall be concerned with the functions of the Crippled Children's Service of the Department of Health and other agencies dealing with chronic illness in children.

(11) Diabetes Committee shall consider all problems concerning diabetes and shall promote interest and educational programs for the medical profession and lay public in the recognition and detection of diabetes. It will encourage and assist the county medical societies in the conducting of diabetes detection programs along with the policies laid down by the American Diabetes Association.

(12) Disaster Committee shall plan statewide programs for disaster situations, provide liaison with the Hawaii Civil Defense Agency, and promote measures to increase interest and knowledge in disaster medical care.

(13) Hawaiian Academy of Science Committee shall

maintain liaison with and encourage participation in the Hawaiian Academy of Science and support its efforts in the Hawaii Science Fair.

(14) Heart Committee shall be concerned with the public health aspects of cardiovascular diseases.

(15) Hospital Committee shall offer to mediate disputes between physicians and hospitals and shall concern itself with hospital planning, accreditation, utilization, and patient care.

(16) Indigent Medical Care Committee shall study and make recommendations toward the solution of problems arising from the relationships of doctors to the Indigent Medical Care Programs of the Department of Social Services and other agencies.

(17) Legislative Committee shall represent the Association in securing legislation which is in the best interests of public health and the advancement in standards of medical practice. It shall consist of at least five members in addition to the following ex officio: the President, the immediate Past President, the President Elect, the President of each component society, the Legislative chairman of each component society's legislative committee, and the chairman of the National Legislative Committee. All legislative matters studied by other committees of the Association shall be coordinated through this committee.

(18) Maternal and Perinatal Mortality Study Committee shall discuss and analyze cases of maternal and perinatal deaths, determine their causes and methods for prevention, and disseminate knowledge gained for education of physicians, nurses, and laity. Members shall serve for three years, one-third to be appointed each year.

(19) Medical Care Plans & Fees Committee shall advise insurance carriers in preparing a fee schedule and specifications for its insurance plans; assist in all matters related to health insurance and hospital plans and rates; negotiate and review all agreements, fee schedules, and contracts of the Association with HMSA, Office of Dependents Medical Care, Workmen's Compensation Bureau, other government programs and insurance carriers, conduct fee surveys; and re-evaluate periodically the Hawaii Relative Value Study. It shall have a Federal Medical Services Subcommittee to review and adjudicate ODMC claims and perform such other services as required by the ODMC contract.

(20) Medical Education Committee shall work closely with the various county societies, specialty groups, and hospitals to coordinate the scheduling and programming of medical speakers. It shall provide liaison between the University of Hawaii and the Association, and support programs to maintain a standard of excellence in training programs for interns and residents.

(21) Medical Practice Act Committee shall make recommendations for changes in the Medical Practice Act when desirable, and shall maintain liaison with the regulatory agencies administering the Act.

(22) Medicine & Religion Committee shall study ways to create the proper climate for communication between the physician and the clergy that will lead to the most effective patient care.

(23) Mental Health Committee shall study, propose, and promote programs, research, and educational activities for the prevention and treatment of mental disease, and shall keep the Legislative and National Legislation Committees informed of legislative proposals on which the Association may take a position.

(24) National Legislation Committee shall review medical and health legislation at the national level, inform the membership regarding it, and where appropriate recommend to the Association what stand to take.

(25) Nurses Liaison Committee shall endeavor to aid the nursing profession in its problems pertaining to better patient care, relations with hospitals and physicians, nursing legislation and education.

(26) Pension and Investment Committee shall be responsible for the operation of the pension trust for the Association employees and advise the Council on investment of Association funds.

(27) Pharmacy Committee shall be concerned with the dispensing of drugs; study, review, and propose pharmacy legislation; and cooperate with the State Board of Pharmacy in solving mutual problems. It shall interpret regulations under the Drug Abuse Acts of the FDA and keep the membership informed.

(28) Public Relations Committee shall promote better relations between the medical profession and the public. It shall determine general policies for various subcommittees. The Committee shall be composed of the following ex officio: the officers of the Association, the President of each component society, the chairman of each component society's public relations committee, the Editor of the HAWAII MEDICAL JOURNAL, and the chairmen of the Public Relations Subcommittees.

(29) Publications Committee shall consist of the officers of the Association with the Editor of the HAWAII MEDICAL JOURNAL ex officio. It shall advise the Editor in setting editorial policies and in reviewing manuscripts, determine fiscal policies and advertising standards. It shall submit to the House of Delegates annually its nominee for Editor of the JOURNAL.

(30) Quackery Committee shall acquire, evaluate, and disseminate information about questionable medical activities and pseudo-medical devices.

(31) Radiation Committee shall work closely with doctors, hospitals, and government agencies in surveillance of radiation use to assure the health and safety of patients and medical personnel.

(32) Research and Planning Committee shall study and anticipate problems relative to the practice of medicine not being studied by other regularly established committees of the Association. It shall either recommend that an area or topic be studied by a standing committee or that an ad hoc subcommittee be established for the purpose of developing guides for the Association.

(33) Scientific Program Committee shall plan the scientific portion of the annual meetings of the Association, select the speakers and topics, and arrange for the financial support. It shall also make tentative plans for the meeting to be held the year following its appointment.

(34) School Health Committee shall study and advise the Association on all matters pertaining to student health and health education in the schools, and shall maintain liaison with education agencies throughout the State.

(35) Tuberculosis Committee shall advise, evaluate, and cooperate with projects for the detection, prevention, and treatment of tuberculosis.

(36) Venereal Disease Committee shall be concerned with measures for the effective control, treatment, and prevention of venereal disease.

(37) Water Safety Committee shall educate the public in areas of water safety and resuscitation techniques, compile statistical data on water accidents, and initiate programs for community benefit.

(38) Woman's Auxiliary Committee shall advise the Auxiliary on policy matters.

(39) Such other committees as the President or House of Delegates may deem necessary.

Section 2. Nominating Committee. (a) A Nominating Committee of eight (8) members shall be elected annually by the House of Delegates at the Annual Meeting from nominations made from the floor at the time of the election. Five members shall be from Honolulu County and one each from the other three counties. The committee shall elect its own chairman. (b) If a member cannot attend a meeting, the President of the Association, with the advice of the president of the component society concerned, may appoint an alternate in his stead from among the members of the component society. (c) Its duty shall be to make the needed nominations for the election of officers at the next annual meeting. (d) The report of the Nominating Committee shall be circulated to the membership at least 30 days in advance of the Annual Meeting at which the election is to take place.

Section 3. Appointment of Committees. (a) The President shall appoint all committees of the Association, except the Nominating Committee, and designate the chair-

man. (b) The term shall be for one year unless otherwise expressly provided. (c) The President-elect may designate a vice chairman. An officer or councilor shall be appointed to each committee and shall report to the Council and their component societies the activities of the several committees assigned to them. (d) Each component society shall have at least one member on each committee, and whenever possible, a delegate shall be appointed to each committee. (e) The President-Elect shall make the committee assignments prior to the Annual Meeting. After he is installed as President, he shall have a list of appointments circulated to the membership. (f) The officers, chairmen of each committee, and the presidents of each component society may be invited to review the assignments prior to their finalization to assure adequate representation of their views.

Section 4. Special Committees. (a) The special committees of this Association may be created by the President or the House of Delegates for the purpose of performing any special duty not otherwise assigned to a standing committee and shall remain in office until their function has been performed and until ordered disbanded by the House of Delegates of the Hawaii Medical Association.

Section 5. Committee Reports. (a) The chairmen of the standing and special committees shall make annual reports to the House of Delegates of the Hawaii Medical Association. (b) The chairmen and members of the standing and special committees who are not members of the House of Delegates of the Hawaii Medical Association shall have the right to present the reports of their committees in person to the Reference Committees of the House and to participate in the debates.

CARL H. LUM, M.D.

Bylaws and Parliamentary Committee

Your Reference Committee reviewed the standing committee definitions and recommends acceptance of this report with the following revisions:

(4) Your Awards Committee shall nominate and select for the Association and other organizations the names of physicians to be honored for outstanding services and abilities, according to established criteria.

(24) Your Reference Committee recommends that the National Legislation Committee be designated a subcommittee of the Legislative Committee under (17) with the duties as outlined.

Discussion was heard from Drs. Walter Quisenberry and Grover Batten on the definition of the Cancer Committee's functions and it is your Reference Committee's recommendation that these functions be maintained as defined in this report under (6).

Your Reference Committee further recommends revision of Section 5. Committee Reports (a) as follows: The Chairmen of the standing and special committees shall make annual written reports to the House of Delegates of the Hawaii Medical Association not later than 60 days before the annual meeting through the office of the Executive Secretary.

Your Reference Committee takes note of the large amount of work this committee accomplished in the last year and commends the Chairman and his members for their efforts.

ACTION:

It was noted that "in person" which appears in Section 5(a) is redundant. After a suggestion was made by the President-elect, it was voted to defer acceptance of this report until the next meeting.

CONVENTION AND SEMINAR

Preliminary negotiations were undertaken for the Pathologists' conference held recently. However, eventually this group preferred to handle all the arrangements and did not find need for our committee.

This instance again emphasized the difficulty the committee has encountered in the past. Most of the specialty societies, thus far, prefer to sponsor their own meetings. The Association, at present, has little control of the convention and seminar program calendar.

RECOMMENDATIONS: (1) The Bylaws Committee and Council recognized this problem and suggested that this committee be dropped. The educational program of the association will be well covered by other committees which have overlapping functions. The members of the committee concur and recommend that this committee be eliminated or suspended until such time as it can function in a better environment.

RICHARD MAMIYA, M.D.

Convention and Seminar

Your Reference Committee recommends approval of the recommendation of this committee and takes recognition of the difficulties of the past year that it has encountered in attempting to organize programs.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

PUBLICATIONS

Although the committee did not hold formal meetings, matters relating to the JOURNAL were discussed at meetings of the officers, all of whom are members of the committee. In addition, one post card poll was taken. The returns were indecisive and the matter in question was subsequently referred to the Council which voted to change mainland advertising collection agencies. State Journals West will take over from State Medical Journal Advertising Bureau.

The major problem with the JOURNAL developed recently in connection with the printer. Legal counsel was sought and it is hoped that this matter will be advantageously settled.

RECOMMENDATIONS: (1) Since September, 1966, will be the 25th anniversary of the HAWAII MEDICAL JOURNAL, that this event be celebrated with a special tribute to our able editor, Dr. Harry L. Arnold, Jr.

RANDAL A. NISHIJIMA, M.D.

Publications

Your Reference Committee recommends approval of this committee's recommendation. It also congratulates the Editor for the fine service he has rendered this Association for the past 25 years.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

HAWAII MEDICAL JOURNAL

The hope expressed last year that our downward trend in advertising revenue might have been reversed has proved premature, as the tabulation shows. We have reached the lowest ebb ever. Perhaps the switch from the State Medical Journal Advertising Bureau to the State Journals West organization, authorized in March by the Council, will improve the picture.

	1961-62	1962-63	1963-64	1964-65	1965-66
SCIENTIFIC	17	19	18½	18½	26*
FEATURES	24	23	27	29	27
TECHNOLOGISTS	2	2	2	2	2
ADVERTISING	53	48	38½	42	38
TOTAL	100	92	86	92	93

* Inflated by a 44-page Festschrift section, honoring Dr. Max Levine, financed wholly by a grant from the Public Health Committee of the Honolulu Chamber of Commerce, and a nine-page symposium on fish poisoning, financed by a grant from Ayerst Laboratories. The other four issues averaged 17 pages of scientific articles each, as in the past.

Dr. Winfred Y. Lee has continued to head the department of book reviews; signed reviews this year were up from 53 to 75, and capsule comments were up as well, from to 43 to 65—140 new books for the Hawaii Medical Library.

Dr. Reppun's freewheeling editorials on the Academy of General Practice page have been continued without restraint; in the May–June issue he will even be permitted to attack fluoridation.

In Memoriam, Reports & Snorts, and This Is What's New have been continued, but Maternal and Perinatal Deaths has been suspended pending legal advice on its form and content.

Dr. Henry N. Yokoyama has continued to perform admirably as News Editor. Dr. Doris Jasinski has been compelled by pressure of domestic responsibilities to relinquish the post of Associate Editor, which is a great loss to the JOURNAL, from the standpoint of both work load, and competence of editing. Her eventual return to the job is anticipated.

As to editorial policy, the JOURNAL participated in the general last-ditch resistance to Medicare, and the equally general reluctant acceptance of it after its passage. We renewed our position of support to the University of Hawaii's medical school. And we have in two issues attempted to clarify the controversy with the HMSA and inform our readers of the facts in the case. No independent editorial positions have been taken on any matters this year.

The special issues on fish poisoning and on microbiological topics in honor of Dr. Max Levine were published as planned, and financed as proposed, by Ayerst Laboratories and the Public Health Committee of the Chamber of Commerce, respectively.

I am grateful for the commendation extended me last year by the House of Delegates for my untiring efforts in maintaining the excellent standard of the Association's JOURNAL, though I am mindful now, as I was then, that the major share of the work is done by your industrious and indefatigable Executive Secretary and my tireless and meticulous Managing Editor, Lee McCaslin. Nevertheless I could not accept the same commendation this year. My efforts are no longer untiring; they are tiring. This summer will complete for me 25 years in this position. I have enjoyed every one of them; the work is challenging, and interesting; but it is time-consuming, and I fear that as the years go by I tend to enjoy it a little less and give it a little less effort.

RECOMMENDATIONS: (1) The fact is that it should be done better than it is being done, and we should be paying someone to do it; on a rough estimate, I would say we should pay a competent person about $5.00 an hour for approximately 100 hours of work on each issue—editing manuscripts, marking copy for the printer, reading proofs, paging the dummy, checking page proofs, and so on.

This would not obviate the need for an Associate Editor to assist and ultimately succeed me; our Help Wanted advertisement for this person is still running. But the need for the paid professional will become acute when I am, as I must ultimately be, replaced. It is subacute right now. I urge that not less than $3,000 be budgeted for editing services the next time the dues are increased—hopefully, in 1967.

(2) With this one additional recommendation, it is recommended that the publication of the HAWAII MEDICAL JOURNAL be continued on the same basis as last year.

HARRY L. ARNOLD, JR., M.D.

Hawaii Medical Journal

Your Reference Committee recommends acceptance of the report of the Editor with the following revisions:

In view of the fact that Recommendation No. 1 pertains to 1967, it is the recommendation of your Committee that action be deferred for consideration in 1967.

Your Committee recommends acceptance of the remaining recommendation in this report and commends the activities of the HAWAII MEDICAL JOURNAL over the past year.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

TREASURER'S REPORT

The budget submitted to the House was approved by the Council at its March 24 meeting. It would appear that even though a deficit of $2,000 for the current year was anticipated, we will probably end up about even. Committee expenses have been estimated without benefit of recommendations of the committee chairmen. Generally speaking, this represents a status quo budget except for additional funds that will be needed by the Legislative Committee, because next year will be a general session, and the Public Relations Committee, because they are embarking on a second TV program. The House will be asked to consider each committee's budget request individually.

As of March 31, 1966, there was $54,655.89 in 11 different savings and loan accounts. Investment of these funds as well as the Physicians' Benevolent Fund is reported by the Pension & Investment Committee.

With reference to special funds, as of March 13, 1966, there was $25,256.03 in the Physicians' Benevolent Fund. The Pension Trust Fund totalled $6,324.50, including employee contributions. Money being held in escrow included $3,260.00 for Mental Health Committee's phychiatric courses, $300.00 for miscellaneous scientific meetings, and $3,911.68 for the anti-smoking project being conducted in the State' sschools. The Health Fair suspense account ended with a $179.59 surplus which was transferred to the PR Committee to be used for its new television program.

The financial outcome of this year's annual meeting is an unknown factor at the time this report is being submitted. The current budget was based on holding the meeting at HIC. It will be held at the Princess Kaiulani where the rates are somewhat lower. It has been suggested that the 1967 meeting be held at the Ilikai, which will have larger meeting areas with the completion of its annex. The costs there are not yet established. Since the House had not suggested registration fees for the 1967 meeting when the Council approved the budget, the income for that event was based on keeping the registration fee at $5.00 for members.

The JOURNAL printing costs have risen and another 8% increase has been imposed by the Star-Bulletin Printing Company.

RECOMMENDATIONS: (1) That the registration fees for the 1967 Annual Meeting be set at a minimum of $15.00 for members and $35.00 for nonmembers. (2) That the budget as approved by the Council be accepted except for the (a) income increase noted in the first recommendation and (b) the adjustments which may be necessary in approving committee budgetary requests. (3) That Leong & Leong, our present auditors who have served us well, be retained. (4) That there be no increase in the dues structure until after a year has passed in which there is an actual as well as an anticipated deficit.

HERBERT Y. H. CHINN, M.D.

INCOME

	7/1 to 3/31 (ACCUMULATED)	1965-66 BUDGET (ACTUAL)	1966-67 BUDGET (PROPOSED)
Membership Dues	$45,330.50	$63,610.00	$66,520.00*
Journal	1,963.22	(2,550.00)	(2,410.00)
Annual Meeting	(95.16)	3,860.00	4,640.00
Interest Income	1,474.47	2,700.00	3,000.00*
Miscellaneous Income	1,057.15	900.00	900.00
Assessments			
Miscellaneous Scientific Meetings	25.00	200.00	200.00
Assessments			
TOTAL INCOME	$49,755.18	$68,720.00	$72,850.00*

* Adjusted by House action to $73,470, $3,140, $78,050 respectively.

EXPENSES

AMA Convention	$ 650.82	$ 2,690.00	$ 3,200.00
Audit & Accounting	1,550.00	2 000.00	2,300.00
Auto Expense	415.00	600.00	600.00
Council Expenses			
Travel	415.00	780.00	780.00
Meals	104.31	240 00	240.00
Per Diem	240.00	400.00	400.00
Donations	20.00	20.00	20.00
Entertainment			
Staff Expenses	214.21	400.00	400.00
Guest Expenses	102.52	150.00	200.00
Insurance	367.68	500.00	500.00
Library Contribution		100.00	100.00
Miscellaneous	100.05	200.00	200.00
Postage			
Stamps	917.85	1,200.00	1,200.00
Bulk Mailing	350.00	300.00	400.00
Permit	30.00	30.00	30.00
President's Contingency Fund		500.00	500.00
Rent	2,376.00	3,170.00	3,170.00
Repairs & Maintenance	141.57	200.00	200.00
Retirement	3,100.00	3,150.00	2 630.00
Salaries	21,788.99	31,470.00	32,250.00
Stationery, Printing & Supplies	1,217.84	1,400.00	1,400.00
Subscription & Dues	726.06	830.00	880.00
Special Authorized Expenses			350.00
Taxes	874.55	1,120.00	1,400.00
Telephone & Cable	1,333.49	1,400.00	1,400.00
Travel	549.94	300.00	300.00
Woman's Auxiliary	1,671.25	3,180.00	3,350.00
Furniture & Fixtures		600 00	900.00
Committee Expenses	14,296.32	20,790.00	24,530.00†
Roster	600.00		2,000.00
Less Journal Reimbursement	(5,265.00)	(7,000.00)	(7,000.00)
TOTAL EXPENSES	$48,894.00	$70,720.00	$78,830.00‡

† Adjusted to $21,962.50 by House action.
‡ Adjusted figure $77,272.50.

Treasurer's Report

Your Reference Committee was pleased to have the presence of the Treasurer in discussing this report.

Your Reference Committee recommends acceptance of this report with the following revision: That recommendation No. 1, to raise registration fees at the 1967 annual meeting be rejected, and that the recommendation No. 4, suggesting that there be no increase in dues structure, also be rejected.

Your Reference Committee moves that Recommendatio No. 2 read: "That the budget as approved by the Council be accepted except for the adjustments which may be necessary in approving committee budgetary requests."

Your Reference Committee recommends acceptance of the remainder of the Treasurer's report.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

PENSION & INVESTMENT

There have been two meetings this past year. At the first, final arrangements were made for the establishment of the Pension Trust Fund for the employees. This is now in operation. Only one employee is not contributing voluntarily and the reason is her husband's company has a profit-sharing plan through Hawaiian Trust which offers a better opporutnity for financial gains through an unusual real estate situation. The Internal Revenue Service has given written approval of the plan. It would appear that the Fund can accomplish its goals without a 10% Association contribution during the next fiscal year. The 1966-67 payroll is estimated to be $32,250.00 and the contribution is set for $2,500. Including employee contributions, whiih are voluntary, there was $6,324.50 in the Fund as of March 31.

The main purpose of the second meeting was to study investment policies for the Association's funds which are now in savings and loan accounts. The committee felt that a large portion of these funds should be transferred to time deposit certificates in the First National and Bank of Hawaii banks. At the subsequent meeting of the Council this recommendation was questioned but it was voted to support the committee's recommendations which were suggested for July 1 implementation. Subsequently, there have been some radical changes in the interest-rate structure. In addition, information has been received from the Federal agency governing insured accounts in savings and loan organizations. In light of this new information and having discussed this with some of the committee members, who are in agreement, it is felt that the use of savings and loan accounts for the Association's funds should be continued.

RECOMMENDATIONS: (1) That no Association money be placed in bank or savings and loan accounts which are not fully Federally insured. (2) That consideration be given to investing a sum not to exceed $30,000 in the proposed Medical Plaza Building of HCMS, which is set up to yield a 6% preferred accumulative participating stock.

HERBERT Y. H. CHINN, M.D.

Pension and Investment

Your Reference Committee had the counsel of the Treasurer in discussing this report and we recommend acceptance of the recommendations contained therein. The discussion with the Treasurer brought to light the fact that regarding Recommendation No. 2, the investment of capital from the State Medical Association into a County project may be beneficial to the Association in many ways: education, convention-wise, and in future assistance that one County can render another.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

MABEL L. SMYTH MEMORIAL BUILDING

Members of the Board of Management are as follows: *Representing the Hawaii Medical Association.* Drs. H. Q. Pang and B. Allen Richardson with Dr. A. S. Hartwell as alternate. Dr. Donald Marshall replaced Dr. Pang January, 1966;
Representing the Hawaii Nurses' Association. Mrs. Wilma Amalu, Miss Charlotte Dennis, with Mrs. Margaret Cookson as alternate. Mrs. Hazel Kim replaced Mrs. Amalu in January, 1966.
Representing The Queen's Hospital, Board of Directors. Mr. A. J. Hebert.

There were six regular and four special meetings during the year. Financially, the building is solvent and has been able to put aside enough for some much needed repairs which it is hoped will be completed within the next few months. There will be some changes made on the second floor when the Bureau of Medical Economics moves into its new quarters.

The Mabel Smyth Building Policies have been reviewed and updated as have those of the Nurses and Physicians Exchange and Radio Page Service. Slight changes were made. It was considered advisable to have a place on the Physicians' rand card reserved for the Physicians' license number.

There has been an increase in membership over last year:

Physician membership increased	9 to a total of 250
Radio Page membership increased	6 to a total of 94
Registered Nurse membership decreased	15 to a total of 90
Practical Nurse membership increased	4 to a total of 30

There has been no increase in the charges for service on the Exchange since March, 1960, although the 4% tax was added this past year.

During our fiscal year 1964–1965 a total of 147,570 incoming and outgoing calls were handled by the Exchange personnel, of which 131,406 were for physicians. To date, nine months of the current fiscal year, the total is 168,012.

We are looking forward to a successful year.

B. ALLEN RICHARDSON, M.D.

Mabel Smyth Building

This report was submitted as a matter of information and your Reference Committee recommends its acceptance.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

NURSES LIAISON

The Nurses Liaison Committee has had a quiet year as issues at hand have tended to be on the state and national levels rather than on a community level. Problems, if any, on a community level have been not of a magnitude to come to the attention of this committee.

Through the past year, great effort has been made on the national and state level to promote improved patient care, particularly through the collaboration of nurses and physicians. This collective effort was exemplified at the Second National Conference for Professional Nurses and Physicians held September 30—October 2, 1965, in Denver, Colorado. Here it was emphasized that hospital structure—physical and social—is in need of being revised so as to facilitate patient care and to maintain the patient as a focal point for the entire organization of each hospital.

Physical hospital revisions for practical purposes had been left to hospital administrators to solve.

Of the social issues pertaining to improving patient care, most emphasis is being placed upon the current status of the nursing profession. There is a great need to standardize education of nurses on the baccalaureate level and of the re-recognition of nursing as a profession. Unfortunately, there have been and still are too many schools of nursing throughout the union offering inadequate training programs. The majority of these are two-year schools and the minority are the three-year schools. The task of standardizing these schools has been initiated already by the American Nurses Association. The effect of this standardization of training will be experienced on the state level in the near future. Not only will the graduate nurse be a more thoroughly trained individual of higher caliber, the practice of nursing will be reestablished as a profession.

Further training of registered nurses has begun also within hospitals to promote improved patient care. This form of training has included in-service programs and workshops which thus far have been successful in updating the current knowledge of practicing nurses.

Needless to say, participation in these programs by practicing physicians has enhanced significantly the training experience and caliber of current registered nurses.

Other topics and issues posed through the course of the year have been varied. Most closely related to the goal of improved patient care have been: (1) Coordinating of hospital services (laboratory procedures, surgical procedures, diet scheduling, janitorial services, et cetera) to the benefit and comfort of patients; and (2) promoting collaboration of team work between personnel responsible for patient care, i.e., physiotherapist, occupational therapist, nurses, dieticians, and the like. (3) There is a need to define the profession of nursing and to re-establish this profession as a desired position in the community. Much of this, it is felt, will be accomplished when all nurses training programs become established on the baccalaureate level.

The issues at hand for the past year will continue to be worked on at the state and national levels for the year to come. The success of this effort is to be evaluated at a third and last joint conference of the American Nurses Association and American Medical Association to be held in 1966. The Nurses Liaison Committee shall continue to direct its efforts likewise to the improved education and training of nurses for the purpose of improved patient care. It is hoped that when the next convention is held in 1966 there will be a delegate from the Hawaii Nurses Association as well as a representative from the Hawaii Medical Association as the greater effort for improved patient care is being made by the American Nurses Association.

CHARMAN JAMES AKINA, M.D.

Nurses Liaison

Your Reference Committee notes that the principles regarding nursing education as expressed in this report; that is, raising all training to baccalaureate will further increase the current nursing shortage without necessarily improving the nursing image and asks that the HMA recommend that the Nurses Association maintain its support of two- and three-year schools on the current status and emphasize the clinical aspect of nurses training as a mode of improving their image.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

SCIENTIFIC PROGRAM

The Scientific Program Committee began working on the scientific portion of the 110th Annual Meeting of the Hawaii Medical Association in May, 1965. Two objectives were set for this Annual Meeting. First, to develop a scientific program of the highest scientific, educational, and informational caliber and still maintain sufficient general appeal to satisfy the varied and diverse interests of our membership. Second, to investigate new avenues of approach for increasing physician attendance.

The scientific program for the 110th Annual Meeting, completed by December, 1965, with the exception of one major change, fulfills the requirements set forth in objective number one.

To attain objective number two the following were instituted:

1. A preliminary mailing of an attractively printed announcement to *all* licensed physicians, and civilian interns and residents in the State of Hawaii during the last week of March, 1966, approximately seven weeks before the scheduled meeting.

2. A second mailing consisting of the final program and HMA registration forms was sent to the above-mentioned physicians plus all physicians of the Armed Forces in Hawaii by April 23, 1966, approximately three weeks before the meeting.

3. A special mailing to the members of the Woman's Auxiliary was prepared inviting them to attend the scientific sessions with their husbands. This mailing was timed for receipt about one week prior to the first day of the Annual Meeting. The purpose of this mailing was twofold—to inform the wives of the special features of this program, and to serve as a third reminder to the physicians.

4. An intensive publicity campaign in the newspapers by the public relations department.

5. Personal telephone reminders by various members of the Scientific Program Committee, HMA officers, and Woman's Auxiliary to those physicians whose registration forms were not received by May 3, 1966.

To increase nonmember mainland physician registration the following avenues were used:

1. The 110th HMA Meeting program announcements were circulated, with the approval of the Scientific Program Committee Chairman, to all doctors along the West Coast in the areas covered by the sponsor's medical representatives.

2. AAGP approval was requested and granted. Printed on the final program was the notice that "This program is approved for ten (10) hours Category I credit in postgraduate education, A.A.G.P."

The results of this intensified campaign to increase attendance at the Annual Meeting are not available at the time of the submission of this report. However, it should be evident at the time of the Annual Meeting.

The basic general theme for the 110th Annual Meeting will be "New Advances in Arthritis, Cancer, and

Athletic Injuries." Included also will be topics dealing with premarital and marital counselling, and Army medical service in Vietnam today. The scientific program will include presentation of papers and open forum panel discussions with audience participation. Guest lecturers for this meeting are as follows: Martin E. Blazina, M.D., Edward W. Boland, M.D., Howard E. Clinebell, Jr., Ph.D., Edwin R. Fisher, M.D., Howard L. Polley, M.D., and Major General Byron L. Steger, MC, USA.

The scientific sessions will again be held at the Princess Kaiulani Hotel. Free coffee and breakfast rolls, cost to be borne by HMA, will be served prior to the beginning of each morning sessions.

The entire panel of guest lecturers, with the exception of Major General Byron L. Steger, is sponsored by Geigy Pharmaceuticals, Division of Geigy Chemical Corporation, Ardsley, New York.

The Scientific Program Committee requested a waiver of registration fees for physicians in the Armed Forces for the 1966 110th Annual Meeting *only*. This was approved by the Council on March 24, 1966, at the interim HMA meeting on Kauai. Fees for social events remain in effect as for any other registrant attending these specific functions. The only way this waiver of the registration fees for physicians in the Armed Forces will affect the HMA financially is the purchase of coffee and rolls for morning sessions.

Due to problems arising from a rearrangement of the exhibit and meeting areas the Scientific Program Committee chairman agreed to assume, for this year only, the chairmanship of the Exhibit Committee. As of the time of the submission of this report, 43 of the proposed 51 exhibit booths have been sold. The cost per booth space this year is $150.00.

A cocktail reception party preceding the HMA Annual Party on Saturday evening, May 14, 1966, for all physicians, wives, and guests (courtesy of Geigy Pharmaceuticals) has been arranged.

Preliminary work has been initiated for the 1967 111th Annual Meeting's scientific program. The Ilikai Convention Hall has been selected tentatively as the meeting place. The probable basic general theme for the 1967 meeting will be "Genetics and Heredity in Today's Practice."

The recommendation of the 1965 House of Delegates that "consideration be given by the Scientific Program and Arrangements Committee to holding the Annual Meeting on other islands" was discussed. Dr. O. D. Pinkerton, President, informed the Scientific Program Committee that to date we had received no formal written invitation to hold the Annual Meeting from our neighboring counties as yet. Further pursuit of this matter is deferred at this time.

RECOMMENDATIONS: (1) That the Scientific Program Committee be granted a budget of $100.00 for miscellaneous expenses for more efficient functioning. Previously, any cost incurred was dependent upon availability of such amounts from the President's Fund or the registration fees.

(2) That after careful consideration of the matter of registration fees for members, the Scientific Program Committee concurred with the Treasurer's recommendation that registration fees for members should be restored to the previous $15.00 level. The reasons are as follows:

a. Reduction of member registration fee to $5.00 has not increased member registration for the Annual Meeting as anticipated.

b. The concurrent increase of the exhibitors' booth fee ($100.00 to $150.00 per booth) and the nonmember registration fees (from $25.00 to $35.00) were insufficient to cover the loss of revenue incurred from item number one above even before booth costs were increased.

c. For specific details refer to Treasurer's report. It is to be noted here again that the one-year trial waiver of the registration fees for physicians of the Armed Forces will not affect the revenue of this Annual Meeting. The reason is very simple and easily understandable. They are mostly nonmembers and must, therefore, pay fee of either $25.00 or $35.00 in the past years. Consequently, their attendance at the meeting has been almost nil.

(3) That the interim meeting of the HMA be held on the outer islands for 1967 pending decision on the location for the 1968 Annual Meeting.

ROBERT P. C. HO, M.D.

Scientific Program

Your Reference Committee reviewed the Scientific Program Committee report and takes note of the excellent work of the chairman of this committee and its members in carrying out a most difficult assignment. We wish to commend them highly for a vigorous program. Your Reference Committee recommends acceptance of this report with the following revisions: That Recommendation No. 2 regarding the changes in registration fees be rejected, and Recommendation No. 3 regarding the location of the annual meeting, also be rejected.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

PRESIDENT'S REPORT

During the 1965-66 term of the presidency of the Hawaii Medical Association many large issues have risen and are still with us. Reference is made primarily to the HMSA and the impact of the two national legislative bills—Medicare and Heart, Cancer, and Stroke.

An effort has been made in the various communications to the membership to advise them regarding assignment of fees for the Medicare program.

An effort has also been made to encourage cohesion among our members regarding the Blue Shield program in Hawaii. The Foundation Plan for Medical Care has been actively encouraged. We have also been active in urging various County Societies and the hospitals of the State to develop functioning Utilization Committees not only for the perusal of Medicare problems, but for all segments of hospital patients. The creation of Review Committees has also been stressed.

We were able to participate fully in structuring the Advisory Committee appointed by the Governor for the study of a Regional Center for Heart, Cancer, and Stroke.

There were seven Medicare Bulletins sent to our members and when more information is available on PL 89-97 other Bulletins will be forthcoming.

A total of six HMSA Bulletins were issued to our members in order to assist in keeping them fully informed regarding the developments in this area of controversy.

There were a total of 224 committee meetings up to April 1, 1966.

It is my belief that the Hawaii Medical Association which now consists of 738 members has reached maturity, and it is fully expected that from now on our House of Delegates and the officers will study diligently all committee reports, all aspects of legislation, and will introduce constructive resolutions not only for the benefit of the Hawaii Medical Association, but for the community in general and to assist in the guidance of the AMA's policy making. The time has ceased when delegates fail to be present out of lack of interest or to inform their County Society Presidents of their inability to attend the deliberations of the House of Delegates. There should rarely be an instance where a President does not know far in advance of the Annual Meeting as to which of his regular delegates will be available for deliberations. No man should ever accept the election to the House of Delegates without accepting its responsibilities and be willing to take the time to discharge them diligently.

Each year the President is called upon to make special appointments to various agencies and organizations. The work of the doctors who agree to accept these appointments is often lost because there is no protocol set up for feed-back. In an effort to correct this situation, each appointee was sent a questionnaire to try to determine when his appointment became effective, if there were a designated period affecting his appointment, if he had been called upon to serve, if he thought his contribution was appreciated, and if he had any recommendations.

Also members are sometimes selected to serve on committees which study matters affecting health and medicine. In addition to the Governor's Boards, over which we have no control whatsoever, the following are a few examples of some appointments that have been made in the last few years: The 19-man Committee that developed as a result of the Michael-Uhl Report, the Governor's Heart, Stroke, Cancer Advisory Committee, and the Health Facilities Planning Council. Only in the second instance was there Association collaboration. Questionnaires were not sent to the doctors who serve on these bodies.

A review of the results of the survey of other appointees is submitted to the House with the suggestion that during the next year something be developed to establish communication with the doctors who serve either to provide liaison or to give advice to outside agencies and organizations. The list of appointees appears at the bottom of the 1965-66 committee list which is in your handbook.

1. *Advisory Committee to the Division of Mental Health.* Dr. K. Y. Lum was appointed in the middle of 1963 and subsequently served as director on a fee-for-service basis for the Comprehensive Mental Health Planning Project from September, 1963, through December, 1965. Recently he has been appointed by the Governor as a member of the Coordinating Committee for Mental Health Planning which advises the Division of Mental Health. He advises that as far as he knows he is still a special representative from the HMA to the Division of Mental Health.

2. *Medical Advisory Committee to the Department of Social Services.* Three of the seven appointees responded. They were appointed in June of 1965. There is no termination date for the appointments. Suggestions for consideration by the House of Delegates include: (1) A reaction to free choice of physician for DSS patients. (2) A position on whether there should be uniform, standardized fees for all counties for DSS patients. (3) If free choice is allowed DSS patients and outpatient departments are depleted of indigent cases, how is outpatient teaching material obtained for the house staff? (4) Should MD's on the teaching service be paid for services rendered the DSS patient? (5) How can provision be made for paying transportation costs of neighbor island members of the committee so that they can attend the meetings that are now being held monthly?

3. *Advisory Committee to the University of Hawaii.* Dr. Bernard W. D. Fong was reappointed in February, 1966, but the termination of this appointment is not known. He attends monthly meetings which determine policies relative to the medical care of University students.

4. *State Planning Committee on Mental Retardation.* Dr. Duke Cho Choy is of the opinion that his 1964 appointment terminated in November, 1965. He was assigned to a task force on preventive aspects of mental retardation. A final report has been presented and the recommendations will hopefully be implemented.

5. *State Employees Retirement Review Board.* Two of the four appointees replied. There is a question whether or not they are still serving. They have been called on to render opinions regarding specific retirement cases to determine whether disability is job connected.

6. *The National Foundation Health Scholarship Committee.* Dr. C. M. Burgess has served several years and has been called only twice to review candidates for scholarships.

7. *Department of Health Radiation Advisory Committee.* Dr. Robert A. Nordyke has served for two years and does not know if there is a termination date of his appointment. In the past year he has not been called upon for advice.

8. *Inter-Society Science Education Council.* This group meets two or three times a year. Dr. Robert A. Nordyke reports that he has been serving for about three years and he knows of no termination date.

9. *Oahu Health Council.* The two appointees are not certain when they were appointed or for how long. They have not been called on to serve in any capacity.

Reports were not received from doctors serving on the following: 10. Inter-Professional Coordinating, 11. State TB Association Legislative Committee, 12. Hawaii Environmental Poison Study Committee, 13. Anti-Smoking Project.

I am referring items 1-13 of this portion of my report to the appropriate reference committees for their comments.

RECOMMENDATIONS: (1) That the dues be increased $10 a year and that the registration fee for members attending the annual meeting be eliminated.

The President wishes to thank the varied and great number of dedicated physicians who have been willing to drop their golf and social functions in order to help the President in the many critical decisions that have been necessary throughout the year.

O. D. PINKERTON, M.D.

President's Report

Your Reference Committee reviewed the President's Report during which time we were pleased to have the presence of the President to enlarge upon revisions that this committee is proposing, namely, that the recommendations of the President be accepted with the additional recommendation of this committee that the $10.00 increase in dues be earmarked for the annual meeting.

ACTION:

The Chairman moved adoption of this portion of the report. After it was clarified by the Treasurer that it was the intent of the recommendation to permit funds not used for the annual meeting to accrue to the general fund, it was passed.

RESEARCH AND PLANNING

The Research and Planning Ad Hoc Committee met but once during the year. Prior to the meeting a memorandum was sent to the members of the committee suggesting a number of areas for consideration and asking advice as to the possible make-up of this committee or other subcommittees.

A meeting of the committee was held on January 25, 1966, at which 16 members were present. Subsequent to this meeting, a questionnaire was sent to those who had attended the meeting and others whose names had been considered as part of the committee which asked for their ideas as to areas best to study. Ten questionnaires were returned. Certain suggestions received more enthusiasm than others. Of the questionnaires returned there seemed to be a general sense that studies should be made of the physician–patient ratio in the islands, the relationship of private and government physicians, medical care of patients above the DSS level but not regularly able to afford medical care, home nursing care, health insurance trends, and the possibility of mandatory postgraduate study for physicians. Little interest was shown in the problems of the retired physician, relicensure of physicians, hospital practice of medicine, or computer medicine. One questionnaire was returned with the suggestion that most of these areas should be studied at the national rather than the local level.

RECOMMENDATIONS: (1) It is still my view that there is need for study in areas in medicine not now well

handled or in areas of potential controversy. I hope that the Medical Association can develop a good research and planning committee.

SAMUEL D. ALLISON, M.D.

Research and Planning

Your Reference Committee reviewed the report of the Research and Planning Committee and the tenor of this report indicates that this will be a very important committee in the future and that the Chairman is to be commended for his interest in promoting this committee. We recommend approval of this report.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

SECRETARY'S REPORT

The total active membership of the Association as of December 31, 1965, was 718, an increase of 41 over December 31, 1964. In 1964 the increase was 17, in 1963 it was 37, and in 1962, 28. The inactive members, reported only through Honolulu County, numbered 11, an increase of four over the previous year. Of the 718 active members, 55 were granted dues waiver, an increase of one over the previous calendar year.

The total number of unlimited licenses issued to physicians to practice medicine in Hawaii as of December 31, 1965, was 1,181, an increase of 53. In preceding years this increase amounted to: 34 in 1964, 62 in 1963, and 75 in 1962.

A new provision in the Medical Practice Act requires that all physicians, except those in the military and Federal employ, apply for a temporary and limited license. The first such license was issued on July 2, 1965, and between then and December 31, 1965, 108 were issued. Subsequently 12 of these doctors obtained unlimited licenses. The breakdown on the T&L licenses is as follows:

Direction	30
Resident	32
Intern	31
Shortage	3
Government	12

All counties except Honolulu grant active membership to physicians holding a temporary and limited license.

The number of military physicians has never been available to us. However, Dr. Robert P. C. Ho obtained a list of these doctors for the annual meeting as the sponsor wished to have them issued a special invitation and also have their registration fee waived. The list contained the names of 161 at Tripler (including 36 interns and 63 residents), 47 in the Navy, and 16 in the Air Corps. We still do not know the number of physicians attached to U.S.P.H.S. or VA. Nor do we know the number working as civilians on Federal reservations.

By counties the active membership is made up as follows as of December 31, 1965:

	Active Dues Paying	Active Dues Waived	Total
Hawaii	50	9	59
Honolulu	568	43	611
Kauai	14	1	15
Maui	31	2	33
Total	663	55	718

Seven members died during 1965: Raymond Otsuka, Samuel R. Brown, K. S. Fong, Cecil Saunders, Jr., Richard Kainuma, John M. Felix, and J. Robert Jacobson.

Two nonaffiliated physicians were reported by Hawaii, the same number as last year; 156 by Honolulu, 34 more than last year; four by Kauai, the same number as last year; and two by Maui, also the same number as last year. All county reports except Maui and Honolulu included physicians with T&L licenses. Maui had no such physicians as of December 31 and Honolulu advised as follows: "We do not have available to us the listings of Temporary and Limited licensees for Honolulu County. The Honolulu County Society does not recognize such licensure as qualifying for membership in the Society. We are unable to furnish the listing to Temporary and Limited licensees."

Since the last annual meeting there have been two Council meetings. At the October 27 meeting the Auditor's report was accepted and the Treasurer was relieved of supervision of the Physicians' Benevolent Fund. Action was deferred on setting a policy on billing by radiologists. The Legislative Committee was asked to study the matter of physician liability under the new PKU testing law. Committee reports were reviewed. No action was required. It was voted to again ask the AMA to hold a clinical convention in Honolulu. A resolution was passed naming the Hawaiian Trust Company administrator of the Pension Trust Fund. Mr. Honda's contract for 1965-66 was presented and approved. The Council voted to approve the Foundation for Medical Care Service Corporation as fiscal agent for PL 89-97 in the State of Hawaii. Mr. V. Thomas Rice was appointed the Association's attorney and an allocation was set up to cover his services. It was voted to reappoint Dr. Harry L. Arnold, Jr., as Editor of the HAWAII MEDICAL JOURNAL. All nominees proposed for the HAMPAC Board were elected. The publishing of a roster of physicians was approved. The Council also concurred with the President that an ad hoc committee should be appointed to study the feasibility of establishing a Committee for Research and Planning.

The March 24 Council meeting was held on Kauai. It was originally planned to hold this meeting at the Mauna Kea Beach Hotel but reservations were unobtainable. At that meeting the Council voted to approve waiver of registration fees for all military personnel attending the HMA Annual Meeting for 1966. The customary waiver was also granted interns, residents, guest speakers, and the Editor of the JOURNAL. A request from the Maternal & Perinatal Mortality Study Committee relating to ambulance service was referred to Honolulu County as was a request for approval to conduct free clinics to administer live measles vaccine in the leeward area of Oahu. Official backing was given the radiology and the pathology societies for their stand on separate and direct billing of patients. Two Maui members reported in December were accepted as of January 1 and waiver of dues for all members reported by the counties were granted. The Treasurer's and Secretary's reports and recommendations were approved for presentation to the House of Delegates. It was voted not to accept any contract for physicians' services with a conversion factor of less than 5.00. Support of the Pension and Investment Committee's recommendations was voted after a previous motion to reconsider these recommendations was tabled. The recommendations will be reported to the House for final approval. Approval was given the Mental Health Committee to enter into discussion with the Hawaii Psychiatric Society and Department of Health relative to intake and release of mentally ill patients at the State Hospital. It was decided to refer to the House the matter of whether the Health Fair should be conducted on a county or state level. The question of the role of the Convention & Seminar Committee was deferred. The Editor's request to change mainland advertising bureau affiliation from the State Medical Journal Advertising Bureau to State Journals West was approved. The recommended stands proposed by the National Legislation Committee were approved as was the method of accepting future recommendations; i.e. Council members will receive the reports of all meetings held by this committee and if no suggestions for change are received within ten*

* Subsequently, the chairman requested that this time lapse be reduced.

days, the President will write Hawaii's four Congressmen and state the Association's stand. An invitation was issued to the World Medical Association to hold a meeting in Honolulu. A time and place for the next annual meeting was selected.

RECOMMENDATIONS: (1) That the House of Delegates set the date and place for the next annual meeting as follows: May 4 - 7 in Honolulu. (2) That the Council be granted permission to change the site and dates of the 1967 annual meeting if unforeseen events should develop to make a change advisable.

RANDAL A. NISHIJIMA, M.D.

Secretary's Report

Your Reference Committee reviewed the Secretary's Report and recommends acceptance of this report with the following revisions: That the recommendation regarding the date and place for the next annual meeting be changed to May 17-21 in Honolulu. Discussion on this recommendation revealed the fact that the President of the AMA may be able to be in Honolulu during the latter dates and it would be desirous to have the meeting coincide with his visit. Your Reference Committee recommends acceptance of the recommendation that the Council be granted permission to change the site and dates of the 1967 annual meeting if unforeseen events should develop to make a change advisable.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

RESOLUTION NO. 3

Re: Increase in AMA Dues

WHEREAS, Although nearly two columns of the "AMA News" were devoted to explaining the reasons the AMA's Board of Trustees recommended increasing the AMA dues from $45.00 to $70.00 effective January 1, 1967; and

WHEREAS, The information contained in this report does not spell out clearly how the AMA activities will be increased in relationship to the increased funding; and

WHEREAS, The AMA at the present time has an $8 million reserve, and the budget at the present time is not only in balance but is leaving a net increase of $786,000 annually even at the present dues rate; therefore be it

Resolved, That the Hawaii Medical Association go on record as opposing a $25.00 dues increase at this time; and be it further

Resolved, That this House of Delegates instruct our Delegate to the AMA to vote against a $25.00 increase, to submit testimony to the appropriate AMA Reference Committee, and make the position of the Hawaii Medical Association known to the AMA's House of Delegates.

Submitted by
SAMUEL D. ALLISON, M.D.

ACTION:

The Chairman moved that the resolution be adopted. The President relinquished the Chair in order to speak against the motion. A full explanation of the need for increased AMA dues was given by the AMA Delegate. It was voted to grant the privilege of the floor to the AMA Alternate Delegate. He asked the Reference Committee to give its reasons for recommending adoption of this resolution.

After considerable discussion the motion to adopt the resolution was defeated.

It was voted to adopt the report as a whole as amended.

Reference Committee on Insurance and Medical Service

Mr. President and Members of the House of Delegates: Your Reference Committee met before an audience of approximately 30 physicians and received testimony on the various resolutions and reports submitted to the Committee for consideration and recommendation. Having heard the discussion of the witnesses and having given careful consideration to all the testimony presented to it, your Reference Committee is pleased to make the following report:

CHRONIC ILLNESS AND AGING

In November, 1964, a permanent Commission on Aging was formed by the State of Hawaii. Mr. Charles Amor was appointed Director of the Commission on Aging. He was formally introduced to the Chronic Illness and Aging Committees on July 13, 1965, at which time he reviewed the various programs of the Commission on Aging. Following Mr. Amor's presentation, Dr. David Pang reviewed the role of the Health Committee of the Commission.

A series of informational meetings was held with representatives of various government departments as well as private agencies regarding the administration of medicare. Because many of the regulations were yet to be finalized, the information made available was sometimes based on government announcements and news releases.

On December 23, 1965, the committee discussed a letter from the chairman of the ad hoc Medicare Committee of the Commission on Aging. This letter requested the committee to co-sponsor a Governor's conference for the third week in February, 1966, regarding "the impact of medicare on medical services and facilities." The committee voted to "go on record as not approving in principle and therefore not in favor of supporting a Governor's conference as projected at this time". (Note: the meaning of "principle" in this case is to have a conference without proper and final federal regulations, and one in which there are at present so many variables it would not be effective.)

RECOMMENDATIONS: (1) That the Hawaii Medical Association continue to support and assist the Commission on Aging. (2) That the Chronic Illness and Aging Committee continue to offer its assistance and cooperation to government departments as well as private agencies in administering medicare. (3) That the committee continue to assist the Department of Health in its efforts to upgrade the standards of Hawaii's nursing and care homes.

GORDON LIU, M.D.

Chronic Illness & Aging Committee

Your Reference Committee first considered the report of the Chronic Illness & Aging Committee. A full and complete discussion of the subject was had. Your Reference Committee feels that the last three words in the second recommendation be deleted changing the recommendation to read "That the Chronic Illness and Aging Committee continue to offer its assistance and cooperation to government departments as well as private agencies." Approval of Recommendations Nos. 1 and 3 is recommended.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

CRIPPLED CHILDREN

The Crippled Children Committee of the Hawaii Medical Association did not have an official meeting this year.

I was in close contact throughout the year with Dr. Katherine J. Edgar, Executive Officer of the Children's Health Services Division, State Department of Health, and no business or problems arose which seemed to necessitate committee action.

ALLAN C. OGLESBY, M.D.

Crippled Children Committee

Your Reference Committee next considered the report of the Crippled Children Committee. Your Reference Committee recommends that this report be accepted.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

FEDERAL MEDICAL SERVICES

Your Federal Medical Services Committee had many cases to decide upon during the past year. We met approximately once every two months to review all cases submitted to this committee.

During the course of the year, the Hawaii Medical Association has been carrying on negotiations with the Office for Dependents Medical Care. We have now negotiated a fee schedule which is more in keeping with our usual, customary, and prevailing fees for services in Hawaii. When the new contract goes into effect we are certain that there will be less need for meetings of this committee. As chairman, I wish to thank all the members from all the islands for their time and effort spent working on this committee.

B. ALLEN RICHARDSON, M.D.

Federal Medical Services Committee

Your Reference Committee next considered the report of the Federal Medical Services Committee. Your Reference Committee discussed this report and recommends the acceptance of this Committee's report.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

HOSPITAL

This committee met at monthly intervals nine times during the past eleven months. In the fall of the year the Stokes Report was discussed and a survey of the large groups practicing in the community was carried out by the members regarding the medical complex idea. All surveys and correspondence indicated an almost unanimous opinion that The Queen's Hospital should not be moved from the present site to join such a complex. There were no objections to the complex establishment on Queen's hospital grounds.

The committee met with Mr. Tunks of the H.F.P.C. and in a combined meeting with Mr. Tunks and the Hospital Association executive committee on two separate occasions. The H.F.P.C. role was discussed at both these meetings and a plea for better communications between these interested groups as well as greater physician participation. The H.F.P.C. agreed to both of these points.

The committee met in September with the executive committee of the Hospital Association to discuss the framework of Medicare and its impact on hospitals and physicians. At this meeting the hospital position on ethical contracts for radiologists and pathologists was discussed. The hospital position appeared to be one in which, with reference to Medicare, they would prefer to have the physicians allow the hospital to bill the patient for his services.

The committee in its October meeting found for a physician who charged The Queen's Hospital with arbitrary suspension of his privileges. This opinion was arrived at after perusal of court testimony, a letter was sent to Queen's regarding this opinion.

The Hospital Committee sent a letter to all hospitals regarding the AMA and HMA stand on ethical contracts. Letters were also sent to the pathologists' and radiologists' societies. As a result of these communications a resolution was submitted to the committee which is being sent to the House separately.

Medicare and utilization committee problems were discussed at the final meeting of this committee. This committee urges all county medical societies to be active in the formation of Utilization Committees to service areas not otherwise qualifying for their own committees.

RECOMMENDATIONS: (1) After preparation of this report a request for financial support was received from the Health Facilities Planning Council. Inasmuch as there was no opportunity for the committee to review this request, the chairman asks that the House of Delegates decide whether or not the Association should support this organization financially and, if so, to what extent.

KEITH F. O. KUHLMAN, M.D.

Hospital Committee

Your Reference Committee next considered the report of the Hospital Committee. Your Reference Committee recommends acceptance of this report and that the Hawaii Medical Association financially support the Health Facilities Planning Council in the amount of $1,000.

ACTION:

The Chairman moved adoption of this portion of the report. It was moved to amend the report by striking out the recommendation of HFPC financial support in the amount of $1,000. Dr. George Mills was granted the privilege of the floor to speak in favor of the Reference Committee recommendation. He emphasized the importance of the doctors' becoming involved in planning activities. It was pointed out that the $1,000 is for a three-year commitment.

The amendment was defeated. It was voted to adopt the Reference Committee report.

INDIGENT MEDICAL CARE

The Indigent Medical Care Committee has been active in several areas during the past year. The main area of activity was in working with the Department of Social Services (DSS) concerning implementation of the new Medicare Act, especially as it applies to care of the indigent and medically indigent in Hawaii, Title XIX. Members of this committee and its chairman also met regularly with the Chronic Illness and Aging Committee, and with the Hospital Committee.

At one of the Hospital Committee's meetings, members of the Hospital Association were present to discuss utilization of hospital and extended care facility beds under the new Medicare Act.

At the first meeting with the DSS, on September 30, Mr. Royce Higa was in attendance and there was a general discussion of care to be given the indigent and medically indigent under Medicare. There were no specific details given at that time as guidelines had not yet been received from Washington.

A second meeting with the DSS, with Royce Higa and Ed Yoshimura in attendance, was held on January 4, 1966. The discussion at that time was much more detailed under the new Medicare Act. Many specific details and points were brought out which are too numerous to mention here. Details of this meeting can be obtained from the report of that meeting. Although there was detailed information given in the areas relating to coverage of the various age categories, eligibility standards, payment to radiologists and pathologists, etc., there was very little if any discussion on the problem of government physicians and payment to specialists who care for medically indigent on the neighbor islands and rural Oahu. It was also noted that the State had sent to Washington a preliminary plan for administration of the new Medicare program.

A final meeting of the Indigent Medical Care Committee was held subsequent to the closing of the Legislature. This was a joint meeting with the Legislative, Hospital, and Medical Care Plans and Fees committees concerning the budget for the medical indigent program. Mr. Tanimura of the Legislative Audit Bureau was present.

Two important things were brought out at this meeting concerning the indigent medical care on the outer islands and rural Oahu: (1) Under the new Medicare Act in order to qualify for payments to medical indigents under Title XIX a state must have the same program available to medical indigents throughout the State. Thus, the indigents on the neighbor islands and rural Oahu should have free choice of physician. This will lead to the eventual phasing out of the government physician program and allow indigents free choice of physician. (2) Second, the report by Martin Segal recommending that payment of physicians taking care of DSS patients be set at $6.00 a visit, to include x-rays and drugs, was not accepted by the Legislature. The final decision left it up to DSS to phase out the government physician arrangement, if this seemed best, and to replace it with payment to physicians on a fee-for-service basis. This of course would bring more equality in payment of fees for care of indigent patients both for routine care and for specialists care.

Thus, it was decided at this meeting to ask each county what the present arrangement for payments is for routine and specialist care and also to determine each county's wishes relative to negotiations for a fee-for-service DSS schedule.

RECOMMENDATIONS: (1) The Indigent Medical Care Committee be instructed to keep in close contact with DSS and other agencies involved with implementing medicare and keep up to date in this area. (2) The HMA go on record as recommending that the administrator to be appointed to run the indigent program under Medicare should be a physician, and that the token salary of $14,000 should be negotiated to a proper level to make it worthwhile to the physician in this position. (3) Third, and most important, the House of Delegates recommend solution through negotiation of the long standing problem of the government physician and payment to specialists of "token fees" for care of the indigent. This will come about through phasing out of the government physician arrangement and allowing free choice of physician to all medical indigents on rural Oahu and the neighbor islands. (4) That the Hawaii Medical Association be instructed to negotiate with DSS for a proper and equitable fee schedule for all types of medical care of the indigent and the medically indigent. (5) A member, or the chairman, of The Medical Indigent Care Committee should be a member on the advisory board to the Department of Social Services.

PATRICK J. WALSH, M.D.

Indigent Medical Care Committee

Your Reference Committee next considered the report of the Indigent Medical Care Committee. Your Reference Committee recommends the acceptance of this report with the following changes: That Recommendation No. 2 read "The HMA go on record as recommending that the administrator to be appointed to run the indigent program under Medicare should be a physician, and that the salary should be commensurate with his responsibility, training, and experience." That Recommendation No. 4 read "That the Hawaii Medical Association be instructed to negotiate with DSS on a fee-for-service basis for all types of medical care of the indigent and medically indigent, including all school physical examinations."

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

LEGISLATIVE

The Legislative Committee held its initial meeting on January 18 and met weekly thereafter until the end of the session.

Bills which were passed during the session are commented on in the Legislative Counsel report.

Most of the committee's efforts were directed toward the prevention of the House version of the Budget being accepted and to this end we were successful. The consensus of the legislators was that the indigents and medical indigents should have free choice of physician for rural Oahu and the neighboring islands, but to retain current use of the outpatient departments in Honolulu proper. However, there should be a ceiling of $8.75 for an outpatient visit and $6.00 for office calls, including drugs and laboratory work. It was the opinion of this committee that since the Hawaii Relative Value schedule has been established by this Association and there is in existence the Foundation for Medical Care, the Department of Social Services should pay the usual, customary, and prevailing fees in the community. It was mandated by the Senate Ways and Means Committee that an amicable solution be worked out between this Association and the DSS.

This year the legislative party was held at Natsunoya. It was fairly well attended. The highlight of the evening was when one of the Representatives spoke in glowing terms of the improved relationship between the legislators and the medical profession over the past several years and expressed hope for our continued close cooperation.

The next session of the Legislature will be one of the most important sessions. Many bills will be introduced that will affect the future of medicine. The Association should start planning for this coming session immediately. The most effective way our voices may be heard when the Legislature meets is for every doctor to take an active part in support of a candidate of his choice.

RECOMMENDATIONS: (1) That this Association put forth extra effort in encouraging its members to work for the candidates of their choice. (2) That specialty and county societies, as well as committees of this Association, give early consideration to legislative matters and transmit their recommendations to the Legislative Committee as far in advance of the session as possible. (3) That the Legislative Committee, in conjunction with the Inter-Professional Committee of Honolulu County, embark on a project to attempt to have the archaic Workmen's Compensation Law revised. (4) That the invaluable services rendered by Mr. Edwin Honda be acknowledged and his contract be extended for another year to November, 1967. (5) That the following budget be allocated for 1966-67:

a. Clerical, $1,300; b. Counsel, $7,000; c. Dinner and entertainment, $1,000; d. *Today's Health,* $150; and e. Miscellaneous, $100.

THEODORE T. TOMITA, M.D.

Legislative Committee

Your Reference Committee next considered the report of the Legislative Committee. Your Reference Committee listened to much testimony relative to legislative counsel fees and budgetary items for entertainment. Your Reference Committee unanimously recommends acceptance of this report and all its recommendations. We commend the Legislative Committee for a most difficult job well done.

ACTION:

The Chairman moved adoption of this portion of the report. After it was determined that the Legislative Counsel does in fact report to the President, it was voted to adopt this portion of the report.

LEGISLATIVE COUNSEL

The Budget Session of 1966 got off to a fast start with a considerable amount of pre-session work by the leadership of each house and the committees which were faced with major bills to pass. This was particularly true of the Senate Ways and Means and the House Appropriations Committees. The session was concluded in the normal 30 days allotted to a budget session.

There was a total of fifty bills passed by the Legislature with the House passing thirty-seven and the Senate

passing thirteen bills. Bills passed which had a direct or indirect bearing on the medical profession numbered five. These were House Bills 5, 199, and 309, and Senate Bills 56 and 355.

House Bill 5 was enacted into law as Act 3 and provides for a driver education program for high school students. House Bill 199 (Act 8) is the operating budget which reflects State departmental operations. Both in the Health and Social Services Departments, there were increases in budgetary allotments. The Legislature suggests the phasing out of government physicians and the resorting to fee for service for medical care and gives discretion to the Social Services Department to do so if and when deemed feasible. The Department is also requested to present recommendations on all categories of inpatient rates.

H.B. 309 (Act 23) provides for home health services to be established under the jurisdiction and control of the State Health Department.

Senate Bill 56 (Act 35) was enacted to allow for the emergency hospitalization of the seriously mentally ill in public hospitals. This was an amendment of Act 103, Session Laws of 1965, which related to hospitalization in private hospitals. That law allows for detention in emergency situations upon the certification of one physician, the detention allowable being for 48 hours.

S.B. 355 (Act 13) allows the Board of Trustees of the Hawaii Public Employees Health Fund to establish a plan to take advantage of the benefits under Federal Medicare. It also enables the trustees to pay the premiums for Medicare limited to those who are in the health fund. The total benefits of whatever plan is devised plus Medicare benefits should be substantially similar to benefits which the beneficiaries have currently. The bill also allows for the establishment of a self-insurance plan, but such a plan for the present would be difficult if not impossible to implement because no reserve fund moneys have been provided for.

As stated at the outset, the production of bills during this session was quite limited. There were numerous bills affecting the medical profession or related to it but which could not receive serious consideration because of the shortness of the session and the fact that major consideration was given to budget matters both operational and capital improvements, and the few other areas receiving consideration dealt with education.

Among some of the significant bills that received some consideration or which were introduced and not given consideration were such bills as the implied consent to chemical tests bill; the certification of psychologists; the comprehensive criminal responsibility bill relating to mentally retarded; a bill allowing registered nurses in certain areas to compound and dispense prescriptions and drugs; a bill for the establishment of a uniform hospital advisory board for public hospitals under Act 97 jurisdiction; a bill requiring the mandatory reporting by doctors where child abuse is suspected; a limited Good Samaritan bill; a bill for the regulation of certain narcotics such as amphetamines, barbiturates, and combinations thereof; a bill for the regulation of the sale of glue; and a bill providing for the exemption of the excise tax on foods, drugs, and medical expenses. Some of the foregoing may be given serious consideration in the 1967 session of the Legislature and, therefore, may be worthy of your consideration between now and February, 1967.

EDWIN H. HONDA, LL.B.

Report of Legislative Counsel

Your Reference Committee next considered the report of the Legislative Counsel. Your Reference Committee examined the report of the Legislative Counsel and noted the great amount of work that was done in this area.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

MEDICAL CARE PLANS & FEES

The committee's work has been divided among its able subcommittee chairmen: Dr. Chew Mung Lum of the Negotiating Subcommittee, Dr. George H. Mills of the Fee Schedule Subcommittee, and Dr. Don E. Poulson of the Workmen's Compensation Subcommittee. In most of the meetings of the past year, the entire committee has been present.

Besides the HMSA work, this committee has met with ODMC, VA, the Department of Health, and the Workmen's Compensation people. In each instance, a fee schedule based on the Hawaii RVS converted at 5.00 for all sections has been requested. Satisfactory new contracts have been executed with both the VA and ODMC. Acceptance of the latter was made on the basis that the discrepancies will be corrected in the next contract period. In the past, there was a gentlemen's agreement not to publish the ODMC Schedule of Allowances.

Now nonpublication is a stipulated part of the contract.

The committee has investigated and continues to study the prevailing fees concept. There may be some advantages to this concept in other localities, but it is totally impractical to adopt such a program in Hawaii under the Blue Shield plan at this time.

The meetings with the Workmen's Compensation Bureau have not been fruitful. The statistical data collected by the Fee Schedule Subcommittee were made available to Dr. Dean Walker. There appears to be resistance in the Department of Labor to accepting the physicians' usual and customary fees for Workmen's Compensation claims. The opposition is not based on the validity of the statistical material presented which sets forth the charges being made, but rather that the insurance carriers would voice strenuous objections to having to raise their premium rates to cover an increase in fees paid physicians. The fact that no increases have been made for a number of years makes this problem even more acute. Hospital rates are increased periodically and the increased rates are accepted by Workmen's Compensation as posted. The law governing the Workmen's Compensation Bureau is being studied by the Legislative Committee. Dr. Rowlin Lichter, a member of the Honolulu County's Interprofessional Committee, has been added to the Legislative Committee to help with this study. In the meantime, the law requires that the prevailing fee in the community be paid for physicians' services. The Workmen's Compensation Bureau appears to be considering different fees for the neighbor islands and rural Oahu. Another problem in this area is the arbitrary discrimination of the Workmen's Compensation Bureau in lowering the fee schedule for radiologic procedures performed by physicians who are not full-time radiologists. There is no contract between physicians and the Workmen's Compensation Bureau but physicians must accept its fees if they treat eligible patients. It is understood that the Bureau is preparing a new fee schedule which will soon be circulated but which will not be adopted until a public hearing is held.

An area of work which will soon be under discussion is the development of a fee schedule for the Department of Social Services. The DSS has been asked to work out a proposal for presentation to the next session of the Legislature. It is anticipated they will phase out government physicians and will provide for fee-for-service payments to physicians who care for DSS clients on the neighbor islands and in rural Oahu. In order to obtain Federal grants, the free choice concept will undoubtedly spread to urban Honolulu as well.

RECOMMENDATIONS: (1) That the House of Delegates reconfirm and strengthen its position taken on January 16, 1965, that the recommendation to accept a new HMSA contract not be made until HMSA agrees to contracts which provide for: (a) Simultaneous and stipulated termination dates of master and individual contracts. (b) Nomination of only one physician to fill each vacancy on the HMSA Board and committees. (c) That no items affecting physicians' fees be transferred from the HMSA

Administrative Operating Procedures to the HMSA Handbook without written permission of the HMA with the concurrence of at least three of the four county societies. (d) That any new medical or surgical plan not being offered for sale at the time the agreements go into effect must be approved by the HMA prior to being offered by the HMSA. (e) That in the future HMSA claims which are subject to review be referred to a committee of the appropriate medical society for processing.

(2) That the House of Delegates reverse the position taken by the Council that no contracts be entered into by the HMA which have a conversion factor of less than 5.00 for any of the five sections of the RVS.

(3) That the House of Delegates reconfirm the position taken on April 30, 1965, that no contracts for physicians' services be entered into which are not based on the current Hawaii Relative Value Study.

(4) That if the Workmen's Compensation Bureau does not adopt a satisfactory fee schedule for physicians, an informational bulletin be sent to all members advising of the efforts of the Association and pointing out that in accepting patients whose bills will be paid through the Workmen's Compensation Bureau, the doctor must also accept the fees established by that Bureau.

(5) That the House of Delegates reconfirm and strengthen the position it took on May 4, 1962, that "the Hawaii Medical Association urge all physicians to bill their normal fees on all fee claims regardless of any commitment on fee schedules. If there was prior commitment, then the physician should make any needed adjustment in his bill after payment is received from the insurance company."

(6) That the Federal Medical Services Committee continue to meet independently of the Medical Care Plans & Fees Committee but that it be made a subcommittee of the Medical Care Plans & Fees Committee in order that its chairman will be a member of the over-all committee charged with negotiating fee schedules for the Association.

(7) That the statistical data collected by this committee not be removed from the HMA offices unless a member of the Medical Care Plans & Fees Committee is present, and that access to this information be granted only after the request is presented to the committee.

(8) That initiation of a prevailing fees program is not indicated at this time, but the committee should continue to keep informed of activities in other areas.

(9) That each county be urged to set up a Claims Review Committee and that in addition there be a similar committee established at the state level which will act as an appeal body.

RICHARD D. MOORE, M.D.

Medical Care Plans & Fees Committee

Your Reference Committee next considered the report of the Medical Care Plans & Fees Committee. Your Reference Committee listened to much testimony on this committee's report. Your Reference Committee wishes to commend the Medical Care Plans & Fees Committee for an outstanding report. Your Reference Committee recommends its acceptance with the following revision of recommendation No. 7 to read "That the statistical data collected by this committee not be removed from the HMA offices except by a member of the Medical Care Plans & Fees Committee and that access to this information by an outside agency or individual be allowed only after the request is presented and granted by this committee and a member of the Medical Care Plans & Fees Committee is present. A minority report will be presented.

MINORITY REPORT

Insurance and Medical Service Reference Committee minority report regarding Recommendation (1) of the Medical Care Plans and Fees Committee Report.

The above-mentioned recommendation stipulates that the House of Delegates reconfirm and strengthen its former position to accept no new HMSA contract until HMSA agrees to several conditions in future contracts.

Discussion before the Reference Committee revealed that an apparent lack of communication existed between the Association and HMSA, as evidenced by the following information brought to light:

1. That stipulated termination dates of future contracts we believed to be an acceptable condition to HMSA.
2. That HMSA appears to recognize and appreciate the concept of electing only one physician to fill each Board and committee vacancy, and regards this as largely a procedural matter.
3. That HMSA accepts the idea that all items in the Administrative Operating Procedures section of the Physicians Handbook affecting physicians' fees require negotiation and acceptance by the Association, prior to modification.
4. That HMSA agrees that the Medical Association has a reasonable interest in as well as a right to criticize projected new medical plans.
5. That HMSA is not averse to the idea of a State Association Review Committee as the logical place to submit its unresolved claims or ethics violations for review or recommendations.

Despite this evidence of apparent improvement in the HMSA attitude towards HMA proposals, negotiations have stalled with neither side likely to retreat its present stand or rephrase its conditions. Reasons for this impasse appear due in part to possibly unsound pressures which may prove ultimately detrimental to the good of a healthy, voluntary, prepaid medical plan.

It is noted that almost 25 per cent of the HMA membership are presently participating in HMSA, and this percentage will undoubtedly rise as time goes on. Hence, a weakening of the relative HMA bargaining strength is envisioned. It is also noted that the strongest deterrent to Federal encroachment on private medical practice will be found in a cordial and progressive relationship between the medical profession and a doctor-sponsored medical plan which commands wide public support and a high enrollment.

It is therefore proposed that a fresh approach be taken in an effort to break the impasse in negotiations by means of these steps:

1. Relax the summarily imposed conditions presently required of HMSA without retreating on principle.
2. Appoint a new Negotiating Committee and request similar action of HMSA, keeping only the respective present Committee Chairmen.
3. Instruct the President of the Hawaii Medical Association to direct renewal of negotiations with HMSA at an early date.
4. In the event of further impasse between the Negotiating Committee, give consideration to the selection of a mutually agreeable person to mediate and direct the course of further negotiations.

EDWARD W. BOONE, M.D.

ACTION:

Dr. Boone spoke in favor of his minority report. He advised that although his position with HMSA was not in any way involved in policy making, it did provide him with a good listening post. He felt that the main stumbling block now is that the HMSA believes it has to agree to the five points as presented without negotiations. Before presenting his report, he checked it with both Mr. Veltmann and Mr. Yuen and they agreed that the statements it contains are a true reflection of HMSA's position. The President was asked to read recent correspondence with HMSA. He read the HMA's letter of April 5, HMSA's reply of April 25, and HMA's answer dated May 6. Dr. Boone was advised that if HMSA were to write the HMA and confirm the specifications in the minority report, the HMA would be happy to sit down with HMSA. Dr. George Mills was granted the privilege of the floor to talk about the splinter sessions the HMSA set up after the negotiating teams reached an impasse.

Dr. Boone moved to accept his minority report in lieu of the first recommendation of the Committee's report. The motion failed to pass.

After a discussion on terminology referring to fees, the Committee's fourth recommendation was corrected by adding: "We strongly urge that in all cases you bill Workmen's Compensation Bureau your usual fee."

The Chairman moved adoption of that portion of the Reference Committee report as revised referring to the Medical Care Plans & Fees Committee. The motion passed.

RESOLUTION NO. 12

Re: HMSA

WHEREAS, In "negotiations" continued over the period of the past year and longer, and since this House of Delegates of the HMA last met in 1965, there has been no indication that the Board of Directors of HMSA has been willing to agree to any compromise on the principles at issue; and

WHEREAS, Some 500 physicians have become "non-participating" in HMSA, as of the middle of January, 1966; and

WHEREAS, This large number of practicing physicians, members of this Association, continue to show confidence in the appropriate committee of this Association serving as "bargaining agent"; now therefore be it

Resolved, By the House of Delegates of the HMA in annual session on 11, 12, 13 May 66, that this Association stands firm on principle, but is willing to compromise on wording, ways, means, and ultimate solution of the impasse between HMSA and the doctors; and be it further

Resolved, That these principles be reiterated for all to see, namely:

(1) That contracts between the doctors and HMSA, either directly and individually, or through a Master Contract, be written for a specific period of time, with a "re-opening of negotiations" date stipulated therein;

(2) That the Association, or the County Medical Societies, be recognized as empowered to speak for their members who will be participating in HMSA;

(3) That the physicians have the right of prior advice and consent, when their services are affected by the initiation of new "Plans" or the revision of existing procedures and Plans; and

(4) That the Review Committee be a committee of the County Medical Society or the State Medical Association.

Submitted by J. I. F. REPPUN, M.D.

Resolution No. 12—Re HMSA

Your Reference Committee next considered Resolution No. 12. Your Reference Committee discussed this Resolution concurrently with the Medical Care Plans & Fees Committee report and it was the unanimous opinion of the Reference Committee that since the intent of this Resolution was covered by the Medical Care Plans & Fees Committee report, particularly in recommendation No. 1, that Resolution No. 12 be not adopted.

ACTION:

The Chairman recommended that the resolution be not adopted. It was voted not to adopt the resolution.

MEDICAL EDUCATION

The Medical Education Committee met on February 10, 1966, at 4:30 P.M. at the Mabel Smyth Auditorium to discuss Public Law 89-239—the Heart Disease, Cancer and Stroke Amendments of 1965. Present at the meeting were the following: Raymond Kaiser, M.D., Associate Regional Director of Community Health, The United States Public Health Service, from San Francisco, California; also present was Dr. Windsor Cutting, Dean of Medical School of the University of Hawaii; Dr. Leo Bernstein, Director of Health of the State Department of Health; Dr. O. D. Pinkerton, President of the Hawaii Medical Society; Dr. Richard K. C. Lee, Professor of Public Health, University of Hawaii; Dr. Fred Shepard, Director of Rehabilitation Center of Hawaii; Dr. Samuel Allison, Past President of the Hawaii Medical Society; Dr. George Mills, President-Elect of the Honolulu County Medical Society; Dr. Theodore Tomita, President-Elect of the Hawaii State Medical Society; and other members of the Committee.

The purpose of the meeting was one of orientation relative to Public Law 89-239.

The stated purpose of the new program is to provide the medical profession and medical institutions of the nation greater opportunity to make available to their patients the latest advances in the diagnosis and treatment of heart disease, cancer, stroke, and related diseases. This is reportedly to be accomplished through the establishment of regional programs of cooperation in research, training, continuing education, and demonstration activities in patient care in medical schools, clinical research institutions, and hospitals.

The chairman of the committee presented an outline describing provisions of the bill. He also presented some aspects of the legislative history of this bill and some aspects of the nature of the program. Dr. Raymond Kaiser elaborated on various aspects of this public law. Dr. Leo Bernstein contributed significantly to the discussion. Dr. Windsor Cutting and Dr. Richard K. C. Lee did not have much to add to the discussions.

The only recommendation made was that Dr. O. D. Pinkerton, President of the Hawaii Medical Association, cooperate actively with Governor Burns in the selection of the Governor's Advisory Committee on Heart Diseases, Cancer, and Stroke in order to expedite the formulation and completion of a Feasibility Study required by the Law.

The following comment was made by AMA President, Dr. James Q. Appel on the amended bill. "While we still cannot support it (this bill) because we believe it still introduces an undesirable concept, the amendments by the Administration certainly make the bill much less objectionable." As with the Medicare bill, the true significance of these alterations will depend on the nature of the regulations promulgated by HEW and the Surgeon General.

RALPH M. BEDDOW, M.D.

Medical Education Committee

Your Reference Committee next considered the report of the Medical Education Committee. Your Reference Committee discussed this report and recommends its acceptance.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

RESOLUTION NO. 13

Re: Clinical Teaching by Practicing Physicians

WHEREAS, The University of Hawaii's School of Medicine is now established; and

WHEREAS, The students who enroll in courses provided by the University's School of Medicine should receive the highest caliber instruction available; and

WHEREAS, Practicing physicians in the community have accepted teaching assignments on the faculty of the University of Hawaii; and

WHEREAS, It is commendable that these individual physicians are giving of their time and knowledge to provide the future physicians and scientists with the instruction they need to carry on the tradition of American medicine; now therefore be it

Resolved, That the Hawaii Medical Association go on record as supporting the work of the practicing physicians who are teaching clinical subjects at the School of Medicine, School of Public Health, and other Schools at the University of Hawaii; and be it further

Resolved, That the Association's Medical Education Committee take cognizance of this work and offer to assist the University in correlating this program with the activities of the Association.

Submitted by THEODORE T. TOMITA, M.D.

Resolution No. 13

Your Reference Committee next considered Resolution No. 13. Your Reference Committee and members of the audience discussed this Resolution. Your Reference Committee feels that many of the practicing physicians of Hawaii could be of great advantage to the University of Hawaii in this area.

ACTION:

The Chairman moved that the resolution be adopted. It was adopted.

MEDICAL PRACTICE ACT

The committee met four times, the last being a joint meeting with the Legislative Committee. The main points of discussion were interpretation of the Act and the Board of Medical Examiners' rules and regulations.

The new provisions for temporary and limited licenses went into effect July 1, and the first license was issued on the following day. Five categories are covered by this type licensure: (1) Shortage, (2) Direction, (3) Government, (4) Resident or Intern, and (5) Emergency.

Fifteen physicians practicing under T&L licenses, which are valid for only 18 months, received unlimited licenses before May 1. Probably a number of residents and interns so licensed have left the State. This figure is not obtainable. A breakdown on existing T&L licenses by category is as follows: Shortage, 4; Direction, 31; Government, 13; Intern, 33; Resident, 40.

A problem relating to a conflict between Federal and State laws governing foreign medical school graduates in resident or intern training was resolved by the Attorney General's office.

One case of a doctor's practicing in a hospital without either a unlimited or a limited license was called to the attention of the committee. He subsequently applied for and received a T&L license.

In order that a clear-cut interpretation of the provisions of the law could be established, it was suggested that clarification could be obtained through Rules and Regulations established by the Board of Examiners. Two meetings were held with the Board members and regulations were developed which are now in the hands of the Attorney General. As soon as he finishes his reviews, a public hearing will be held.

RECOMMENDATIONS: (1) That when the Rules and Regulations of the Board of Medical Examiners are established that they be circulated to all HMA members. (2) That next year's committee conduct a poll of the members to determine if the present system governing physicians practicing under the direction of licensed physicians is in the best interests of the public.

RICHARD D. MOORE, M.D.

Medical Practice Act Committee

Your Reference Committee next considered the report of the Medical Practice Act Committee. A full and complete discussion was had by members of the audience. Your Reference Committee feels that the activities of the Medical Practice Act Committee could best be served by its being a subcommittee of the Legislative Committee. Therefore, your Reference Committee recommends acceptance of this report and that the Medical Practice Act Committee be made a subcommittee of the Legislative Committee. Furthermore, that recommendation No. 1 be approved, and that recommendation No. 2, to conduct a poll, be referred to the Legislative Committee for further consideration and decision.

ACTION:

The Chairman moved adoption of this portion of the report. After it was pointed out that the recommendation to make this a subcommittee does not affect the Bylaws, it was adopted.

NATIONAL LEGISLATION

The following positions by the committee have been approved by the HMA Council: (1) Opposition to the Hart bill (S. 2568) which would prohibit physicians from dispensing drugs, eyeglasses, appliances, etc., for a profit. (2) Support of HR 13119, the clean air bill. (3) Support of the AMA position on HR 92488 relative to regulation of animals used in research requiring licensure and regulation of research laboratories. (4) Support of the AMA position opposing HR 9256 which, if enacted, would provide direct Federal loans to group practice facilities. (5) Support of S. 2809 which would authorize funds under Hill-Burton for additional hospital electrical systems.

Letters of acknowledgment have been received from all four Congressmen and Senator Inouye answered in detail. He advised that he concurred in the Association's stand on the Clean Air bill and the bill to provide for hospital electrical systems. With reference to the Hart bill, he said he thought "you can see that when medical groups dispense drugs and devices they may open themselves to complaints from independent pharmacies concerning restraint of trade. " He supports the bill to provide for group practice loans because he thinks "that the growing demands on medical facilities in this country, particularly in smaller communities, would be eased by this type of legislation. As I see it, this bill would encourage the Kaiser type of medical program which by its growing enrollment and reputation is good medicine. "

RECOMMENDATIONS: (1) That the House of Delegates confirm the Council's action in permitting this committee to set policy on national legislative matters, provided that no serious objections are entered by any member of the Council within five (5) days after the committee's recommendations have been circulated to the Council. (2) That the position of the HMA be made known to each Hawaii member in Congress regardless of whether the bill in question originated in the Senate or the House.

L. Q. PANG, M.D.

National Legislative Committee

Your Reference Committee next considered the report of the National Legislative Committee. After considerable discussion of the subject, your Reference Committee feels that the activities of this committee should also be placed in a subcommittee of the Legislative Committee. It is recommended that the National Legislative Committee's report and its recommendations be approved and that the activities of this committee be accomplished by a subcommittee of the Legislative Committee.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

PHARMACY

The Pharmacy Committee has not met this year because of the difficulty of getting members together for a meeting. Several matters have come to the attention of the chairman of the Committee which have been of considerable importance and have been dealt with personally by the chairman in talking to the members of Hawaii's Delegation to the U. S. Congress.

Of principal interest at the present time is the Hart Bill which would forbid physician ownership of pharmacies or the individual dispensing of drugs by physicians at any kind of profit. At the present time this bill is in the Judiciary Committee and is being held there

pending the outcome of the anticipated suit in California with respect to a similar bill. The California Medical Association has felt that they would not contest the state legislation until the bill went into effect next year at which time they will then contest it. There seems to be no progress on the bill at the present time.

As of this date we are not involved in the current dispute between the Board of Pharmacy and some of the hospitals.

JOHN F. CHALMERS, M.D.

Pharmacy Committee

Your Reference Committee next considered the report of the Pharmacy Committee. No one appeared to discuss the report. However, your Reference Committee feels that the activities of the Pharmacy Committee could well be handled by a subcommittee of the Legislative Committee. It is recommended that the Pharmacy Committee report be accepted and that the activities of this committee be placed in a subcommittee of the Legislative Committee.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

RESOLUTION NO. 1 (Revised)

Re: Medicare

WHEREAS, Public Law 89-97 has been enacted by the Congress of the United States and endorsed by signature of President L. B. Johnson; and

WHEREAS, Under this law, Title XVIII—Health Insurance for the Aged, (Medicare), begins with a pledge (Sec. 1801), which reads "Nothing in this title shall be construed to authorize any Federal officer or employee to exercise any supervision or control over the practice of medicine or the manner in which medical services are provided . . ."; and

WHEREAS, The law states explicitly that no doctor or doctors will be required to take part in the Medicare program unless they so desire; and

WHEREAS, The Principles of Medical Ethics of the AMA, Sec. VI, state: "A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care."

WHEREAS, Sec. 1871 of this law extends such unlimited power to the Secretary of the Department of Health, Education and Welfare, that we are convinced that our participation in any degree, will make it impossible to insure continued practice of ethical medicine in the best interests of the public; now therefore be it

Resolved, By the House of Delegates of the HMA in annual session 11, 12, 13 May 66:

(1) That the members of this Association be apprised of the contradictions inherent in the law,

(2) That, in fact, the implementation of the law by the Dept. of HEW will influence a physician as to his treatment of a beneficiary-patient in his office.

(3) That, in a hospital, by guarding excessively against abuse and overusage, both of which practices are built-in possibilities, the regulations of HEW will, in fact, interfere with the doctor-patient relationship that is the essence of recovery from illness or injury,

(4) That, by asking physicians to implement these regulations in the hospital, by devising Utilization Review Committees, and by serving on them, HEW will be asking us to give up precious time better spent on the care of the sick,

(5) That, by expecting physicians to police the plan through Claims Review, HEW is asking us to make a bad law work, pitting doctor against doctor; and be it further

Resolved, That this body distribute a warning to every member, to the effect that each physician must decide for him or herself whether to forsake the Oath of Hippocrates and The Principles of Medical Ethics when he or she permits a Third Party, in this instance MEDICARE, to come between, by law or by fiat, and influence what the physician believes is for the best interest of his or her patient.

Submitted by J. I. F. REPPUN, M.D.

Resolution No. 1—Re Medicare

Your Reference Committee next considered Resolution No. 1, as revised, and recommends the acceptance of this Resolution with the following change in the last "Resolved" to read as *"Resolved,* That this body advise every member, to the effect that each physician must decide for himself or herself whether to forsake The Principles of Medical Ethics when he or she permits a Third Party, in this instance Medicare, to come between, by law or by fiat, and influence what the physician believes is for the best interest of his or her patient."

ACTION:

The Chairman moved that the resolution be adopted with the recommended revisions. The motion failed to carry and the resolution was not adopted.

RESOLUTION NO. 2

Re: Hospital Based Specialists

WHEREAS, The practice of Anesthesiology, the practice of Nuclear Medicine, the practice of Pathology, and the practice of Radiology have been repeatedly defined as an integral part of the practice of medicine and are no less so when they are carried on in a hospital; and

WHEREAS, The practice of medicine includes the services of technicians performed under the supervision and direction of licensed physicians; and

WHEREAS, The supervising physician is legally responsible to the patient for the quality of such technical services; and

WHEREAS, A hospital cannot be licensed to practice medicine and therefore cannot provide medical services to patients through and by means of employed licensed physicians or through technicians whose services are performed as the agents of a licensed physician; and

WHEREAS, The House of Delegates of the American Medical Association in October, 1965, adopted the following statement of policy: "Hospital based medical specialists are engaged in the practice of medicine. The fees for the services of such specialists should not be merged with hospital charges. The charges for the services of such specialists should be established, however, billed and collected by the medical specialist in the same manner as are the fees of other physicians"; therefore be it

Resolved, That the Hawaii Medical Association endorses the following principles:

(1) The hospital based specialists should be subject to the same staff and hospital requirements as all other physicians.

(2) Where equipment and assistants, whether professional, technical, or nontechnical, are a significant component of his practice, the specialist should assume full responsibility for their supervision, direction, and control.

(3) All hospital based specialists should bill and collect independently from the patients they serve, and be it further

Resolved, That all hospital based specialists should actively seek a relationship with their hospitals that includes these principles; and be it further

Resolved, That any physician who is a party to any arrangement under which a hospital is permitted to purvey his services to patients for profit may be considered to be engaging in unethical practice.

Submitted by JOHN HANLEY, M.D.
President
Hawaii Society of Anthesiologists
JAMES BALL, M.D.
President
Hawaii Society of Nuclear Medicine
ANN B. CATTS, M.D.
President
Hawaii Society of Pathologists
GEORGE HENRY, M.D.
President
Radiological Society of Hawaii

Resolution No. 2—Re Hospital Based Specialists

Your Reference Committee next considered Resolution No. 2. Your Reference Committee heard much testimony from the audience regarding this resolution and recommends the following additions and deletions. In the first "Whereas" after "the practice of Pathology" insert the words "The practice of Physical Medicine and Rehabilitation" and in the signatures at the bottom of the Resolution add "R. Frederick Shepard, M.D., President of Hawaii Society of Physical Medicine and Rehabilitation," and that the third "Resolved" stating "Resolved, that any physician who is a party to any arrangement under which a hospital is permitted to purvey his services to patients for profit may be considered to be engaging in unethical practice" be deleted, and the following be substituted "Resolved, That a copy of this resolution be sent to Administrators of Hospitals, Board of Trustees or governing bodies of hospitals in the State of Hawaii." The revised resolution to read:

RESOLUTION NO. 2

Re: Hospital Based Specialists

WHEREAS, The practice of Anesthesiology, the practice of Nuclear Medicine, the practice of Pathology, the practice of Physical Medicine, and the practice of Radiology have been repeatedly defined as an integral part of the practice of medicine and are no less so when they are carried on in a hospital; and

WHEREAS, The practice of medicine includes the services of technicians performed under the supervision and direction of licensed physicians; and

WHEREAS, The supervising physician is legally responsible to the patient for the quality of such technical services; and

WHEREAS, A hospital cannot be licensed to practice medicine and therefore cannot provide medical services to patients through and by means of employed licensed physicians or through technicians whose services are performed as the agents of a licensed physician; and

WHEREAS, The House of Delegates of the American Medical Association in October, 1965, adopted the following statement of policy: "Hospital based medical specialists are engaged in the practice of medicine. The fees for the services of such specialists should not be merged with hospital charges. The charges for the services of such specialists should be established, however, billed and collected by the medical specialist in the same manner as are the fees of other physicians"; therefore be it

Resolved, That the Hawaii Medical Association endorses the following principles:

(1) The hospital based specialists should be subject to the same staff and hospital requirements as all other physicians.

(2) Where equipment and assistants, whether professional, technical, or nontechnical, are a significant component of his practice, the specialist should assume full responsibility for their supervision, direction, and control.

(3) All hospital based specialists should bill and collect independently from the patients they serve, and be it further

Resolved, That all hospital based specialists should actively seek a relationship with their hospitals that includes these principles; and be it further

Resolved, That a copy of this Resolution be sent to Administrators of Hospitals, Board of Trustees or governing bodies of hospitals in the State of Hawaii.

Submitted by JOHN HANLEY, M.D.
President
Hawaii Society of Anesthesiologists
JAMES BALL, M.D.
President
Hawaii Society of Nuclear Medicine
ANN B. CATTS, M.D.
President
Hawaii Society of Pathologists
GEORGE HENRY, M.D.
President
Radiological Society of Hawaii
R. FREDERICK SHEPARD, M.D.
President
Hawaii Society of Physical Medicine and Rehabilitation

ACTION:

The Chairman moved that the resolution be adopted with the recommended revisions. It was voted to adopt the resolution as revised.

RESOLUTION NO. 4

Re: Workmen's Compensation

WHEREAS, The Workmen's Compensation Bureau fee schedule is decidedly below the going rate in this community and has not been revised since January 1, 1962; and

WHEREAS, An open hearing was held 1½ years ago at which time representatives from this Association and certain specialty groups appeared and recommended changes in the face of solid opposition from industry, insurance, and labor representatives, and

WHEREAS, We were told the Workmen's Compensation Bureau would take our requests under advisement; and

WHEREAS, Nothing to date has emerged from the Bureau; now therefore be it

Resolved, That this Association advise its members they need not accept Workmen's Compensation Bureau cases for treatment and that a copy of this resolution be sent to the Director of Labor and Industrial Relations and to the Director of the Workmen's Compensation Bureau.

Submitted by CHARLES S. BROWN, M.D.

Resolution No. 4—Re Workmen's Compensation

Your Reference Committee next considered Resolution No. 4. After much discussion from the audience your Reference Committee concludes that this subject is adequately discussed and presented by the Medical Care Plans & Fees Committee and highly commends the intent of this resolution but feels that the resolution is redundant.

ACTION:

The Chairman recommended that the resolution be not adopted. It was voted not to adopt the resolution.

RESOLUTION NO. 5

Re: Hospital Practice of Medicine

WHEREAS, The Principles of Medical Ethics of the AMA as outlined in Section 6, Paragraph 6, Judicial Council and Reports, 1966, states: A physician should not dispose of his professional attainments or services to any hospital, corporation, or lay body by whatever name called or however organized under terms or con-

ditions which permit the sale of the services of that physician by such agency for a fee; and

WHEREAS, Indigents and medical indigents, and the general public of the State of Hawaii qualifying as beneficiaries under Title XVIII and Title XIX of Public Law 89-97 may choose medical service in hospitals, corporations, and public outpatient clinics; now therefore be it

Resolved, That physicians providing these services be bound by the Principles of Medical Ethics as outlined and that these institutions may not act as agents for a physician in any contract or agreement without consent of the physician and of the medical staff of such institution; and be it further

Resolver, That where such physician services are now sold by the above-named institutions or agencies the financial arrangement, if any, between physicians and such parties as named be on a mutually satisfactory basis. This refers to remuneration for teaching, research, charitable services or the like; and be it further

Resolved, That physicians violating the application of the Principles set forth in this resolution be subject to censure by the Council of the Hawaii Medical Association, and that hospitals, lay corporations, and public clinics violating the intent of this resolution be reported by the Council of the Hawaii Medical Association to the Joint Commission on Accreditation of Hospitals for violation of these ethical principles.

Submitted by KEITH F. O. KUHLMAN, M.D.

Resolution No. 5—Re Hospital Practice of Medicine

Your Reference Committee next considered Resolution No. 5. A full and complete discussion on the subject was had. Your Reference Committee feels that this resolution clarifies the position of the HMA in regards to the relationship of the physician and his services to any hospital or corporation.

ACTION:

The Chairman moved that this resolution be adopted. It was voted to adopt this resolution.

RESOLUTION NO. 6

Re: Statistical Data for PL 89-97

WHEREAS, Public Law 89-97 is now the law of the land; and

WHEREAS, The physicians are law-abiding citizens who are sworn to uphold the laws of the land; and

WHEREAS, The interjection of a third party can be a serious threat to the quality of medical care rendered by physicians; and

WHEREAS, The proposal of the Social Security Administration's Bureau of Health Insurance which would require transmittal of 100% of the statistical data collected, including code numbers assigned to individual doctors, is unnecessary; and

WHEREAS, The best patient care depends upon the freedom of physicians to make individual decisions for individual patients; now therefore be it

Resolved, That the Hawaii Medical Association go on record as opposing the proposal of the Social Security Administration both as to the quantity of statistical data and the inclusion of individual physician code numbers in the statistical data it will require to be transmitted to it by the fiscal intermediaries of Part B of PL 89-97; and be it further

Resolved, That this House of Delegates instruct its delegate to the American Medical Association to submit the foregoing resolution to the House of Delegates of the American Medical Association at its 115th Annual Convention, and to support other resolutions similar in intent.

Submitted by KEITH F. O. KUHLMAN, M.D.

Resolution No. 6—Re Statistical Data

Your Reference Committee next considered Resolution No. 6. After much discussion of this subject, your Reference Committee feels that any proposal of the Social Security Administration to classify individual physicians and the statistical data collected would cause deterioration of the patient-doctor relationship.

ACTION:

The Chairman moved that this resolution be adopted. It was voted to adopt this resolution.

RESOLUTION NO. 7

Re: Assignment of Benefits

WHEREAS, There exists in the minds of many of the members of the Hawaii Medical Associaton some confusion as to the wisdom of accepting assignment of benefits from the fiscal intermediary of Part B of PL 89-97; and

WHEREAS, It is the duty of the Hawaii Medical Association to keep its members informed; and

WHEREAS, The Law provides for two methods of payment—either the physician agrees to accept assignment of benefits from the fiscal intermediary or the physician provides a receipted bill to the patient which shows the types of service rendered, the date the service was rendered, and the fee charged for the service; and

WHEREAS, In the event the physician elects to mark the claim form to accept assignment from the intermediary, he will be reimbursed, after the $50 deductible has been incurred, at the rate of 80 per cent of what the intermediary determines to be a reasonable fee for the service performed and the reasonable fee, as determined by the intermediary, must be accepted as payment in full; and

WHEREAS, In order for the patient to receive any payment to apply against physicians' bills on which an assignment of benefits is not agreed upon he must present to the fiscal intermediary a receipted bill which not only contains the total physicians' charge but also contains the dates and types of service rendered; and

WHEREAS, Payment to the individual who presents a receipted bill to the fiscal intermediary is on the basis of 80 per cent of that amount which the intermediary determines to be a reasonable fee rather than 80 per cent of that amount which the patient has paid for the service; and

WHEREAS, The physician may, if he wishes, ask for assignment for some but not necessarily all of his claims; now therefore be it

Resolved, That the Hawaii Medical Association obligate itself to inform its members by distributing a copy of this resolution that every doctor should give each bill individual consideration before making a decision on whether or not to accept assignment of benefits.

Submitted by RICHARD D. MOORE, M.D.

Resolution No. 7—Re Assignment of Benefits

Your Reference Committee next considered Resolution No. 7. A full and complete discussion of the subject was had and your Reference Committee feels the intent of this Resolution is to acquaint every physician with his responsibility and duty in regards to the Assignment of Benefits under Part B of PL 89-97.

ACTION:

The Chairman moved that the resolution be adopted. It was voted to adopt the resolution.

RESOLUTION NO. 8

Re: Free Choice of Physician

WHEREAS, The intimate relationship between physician and patient is served best without the interposition of any third party, whether in the area of diagnosis and treatment or the payment for these services; and

WHEREAS, The free choice of physician and hospital should be the inalienable right of every unincarcerated person; and

WHEREAS, This right of free choice is recognized nationally by the Federal government when they allocate funds back to the states for medical care programs; and

WHEREAS, The State Legislature has requested that the Department of Social Services investigate the possibility of offering their clients free choice of physician and hospital; now therefore be it

Resolved, That the Hawaii Medical Association reaffirm its stand that all individuals, regardless of their ability to pay, have the right of free choice of physician and hospital; and be it further

Resolved, That this right be extended to the clients of the Department of Social Services of the State of Hawaii through prepaid insurance or a similar mechanism; and be it further

Resolved, That a copy of this resolution be circulated to the Director of the State Department of Social Services, to all members of the present Legislature, and to all members elected to serve in the next Legislature.

Submitted by GEORGE H. MILLS, M.D.

Resolution No. 8—Re Free Choice of Physician

Your Reference Committee next considered Resolution No. 8. A full and complete discussion was had and your Reference Committee feels that this resolution states the position of the HMA's stand regarding the free choice of physicians in hospitals by the patient whether indigent or a private patient.

ACTION:

The Chairman moved that this resolution be adopted. It was voted to adopt this resolution.

President's Report, Items Nos. 2 and 5

Your Reference Committee next considered Items 2 and 5 of the President's Report. With reference to No. 1, the first, second, and fourth items are already covered elsewhere. Your Reference Committee feels that the fifth item needs more study and that the third item should be referred to the Medical Education Committee. In addition, further information should be obtained on Item 5.

ACTION:

The Chairman moved adoption of this portion of the report as explained. It was adopted.

It was voted to adopt the report as a whole as amended.

Your Reference Committee wishes to thank the many members of the Association for their invaluable discussion and contribution to this Reference Committee. Your Reference Committee wishes to thank Mrs. Heather Akana of the HMA staff for her valuable assistance in the preparation of this report.

REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Mr. President and Members of the House of Delegates:

Your Reference Committee on Miscellaneous Business met before an audience of interested physicians and guests and received testimony on the various resolutions and reports submitted to the Committee for consideration and recommendation. Having heard the discussion of the witnesses and having given careful consideration to all the testimony presented to it, your Reference Committee is pleased to make the following report:

WOMAN'S AUXILIARY TO THE HAWAII MEDICAL ASSOCIATION

Our seventeenth year of existence has been a very fruitful and rewarding one, made possible by the continuing enthusiasm and cooperation of all our members and our doctor husbands. Our greatest strides have been made in the areas of Community Service, which encompasses Safety, Health Careers, Mental Health, and Disaster Preparedness; International Health Activities; and participation in National Auxiliary meetings and workshops.

We had our full complement of representatives at the 42d Annual Meeting in New York City last June. Our delegates were Mrs. Peter Kim of Kauai; Mrs. George Mills of Honolulu; an alternate, Mrs. Clagett Beck of Honolulu; and myself as the Presidential Delegate. This is always a thrilling and rewarding experience, being a part of such an alert and knowledgeable group of ladies, meeting together to share their common interests and purpose.

The Annual Fall Conference of Presidents and President-elects, held each year in Chicago, was attended by President-elect Mrs. James Harrison and myself. I found my second time at this meeting even more stimulating and profitable than the first. I greeted and renewed friendships made among the presidents-elect and National Officers I had met the year before.

This year the Fall Regional Workshops were enlarged to include five more State Committee Chairmen and the President-elect, in addition to the President and the American Medical Education Research Foundation Chairman as before. The meeting was completely underwritten this first year by the AMA, and was a two-day meeting held at the Mark Hopkins Hotel in San Francisco with the national officers and national and regional chairmen of these same committees sharing their ideas and goals with us. Attending from here were Mrs. James Harrison, President-elect; Mrs. Fugate Carty, AMA-ERF; Mrs. Robert Johnston, Community Service; Mrs. Charles Yamashiro, Membership; Mrs. Allen Richardson, Legislation; Mrs. John Cooper, Mental Health; and Mrs. Robert Cole of Maui, Health Careers chairman pro tem. Meeting their counterparts from the other states in our Western Region and exchanging ideas and problems proved to be very inspiring and exhilarating for our chairmen who all gave most excellent reports back to the general membership at our own Fall Conference, held in November at the new Waikiki Plaza Building. We were most fortunate in having the National President, Mrs. Richard A. Sutter, as our guest speaker at the luncheon which followed this conference.

Mrs. Sutter and her husband spent ten days in the Islands combining her official visit to us with a bit of a vacation for them both, which has been most ably chronicled in the March issue of *M.D.'s Wife,* the magazine for physicians' wives, published by the Woman's Auxiliary to the American Medical Association, Inc. We owe a great debt of gratitude to Betty Liljestrand who is now serving as Treasurer of the National Auxiliary for spearheading and carrying through the monumental task of coordinating for this article, which highlights our accomplishments to the entire membership of 88,000 physicians' wives. A "Taste of Paradise," which tells in detail of the Sutter's Hawaiian Holiday, and "Safety With a Hawaiian Twist" should be required reading in all our households.

Community Service accomplishments by our component auxiliaries this year have been most outstanding and meaningful and cover a broad spectrum of cooperation and individual efforts. Our first recognition of this effort came in the form of a "Certificate of Commendation" presented by the Women's National Safety Conference of the National Safety Council for "meritorious service to safety in the Citation Awards Program." The Honolulu County Medical Auxiliary interested key community groups in conducting an "Inventory of Home Safety Programs in Honolulu," which led to the formation of a branch of the National Safety Council in Honolulu, and Mrs. Charles Yamashiro, past president of the Honolulu County Auxiliary, has been asked to chair this committee of the Oahu Health Council.

Honolulu County's Annual Guest or Lay Day Program, which is always an outstanding contribution to the

community, was set up this year as a Home Safety Seminar. Over two hundred leaders of civic and service groups, as well as presidents of PTA's and women's organizations were shown programs, demonstrations, exhibits, and films that are available for their use. Each person attending was supplied with a kit containing guides and informative materials, and the subsequent scheduling and use of films and program ideas presented has been most gratifying. Our "Poison Goes Hawaiian" slides continue to be in constant use in the schools and clubs throughout the State.

Several of our committees participated in the First Hawaii Health Fair sponsored by the Hawaii Medical Association last October. The Disaster Preparedness Chairman took charge of, and the Auxiliary financed, the feeding of the Moulage Team that put on the demonstration of a Civil Defense Hospital in action. The Community Service Chairman saw that the Information Booth was staffed with our Auxiliary members. Honolulu County Auxiliary set up a Doll House of health hazards and held a contest to find the correct number of hazards shown. Sixteen of the 7,000 entries won prizes for finding the 76 hazards. This doll house is now available to schools and organizations for educational purposes.

Our State AMA-ERF chairman will have a healthy sum to our credit when her final tally is made in May. Note paper, Xmas cards, and In Memoriam donations, are a steady source of income; and Honolulu County has a large Fund Raising Dinner with a Silent Auction planned at our new Liberty House Store late in April.

"In Memoriam—Doctors of Hawaii" continues to grow under the devoted hand of Mrs. Robert Katsuki. She now has 395 biographies completed with 192 accompanying photographs. Her research has been wide spread and untiring to accomplish this.

The Health Careers Chairman recruited members to help with the Annual Careers Day Program put on by the Medical Association, and we have continued giving subscriptions to *Today's Health* to all universities and colleges in the State. She also helped with the Nurses Careers Workshop, sponsored by the Hawaii League for Nursing.

Our Bylaws, as revised last year, were accepted by the membership at Convention, and this year we have only one very minor amendment to be proposed.

For a small auxiliary we have done a stupendous job in International Health Activities—sending one and one-half tons of medical supplies (bandages, drugs, solutions) to the Medical Launch Project in Hong Kong harbor. Many have contributed to this, but a few stalwart souls have borne the brunt of all the sorting and necessary packing. Mrs. Harold Lawson and Mrs. Charles Yamashiro deserve much credit for their tireless devotion to this project.

Our component auxiliary members continue to be most active on their respective islands, and faithful participants in every health related activity as well as other community endeavors. Kauai members have edited a Manual for Candy Stripers and set up training sessions and programs for these Junior Volunteers. Maui has continued its project of making hand puppets for young hospitalized patients. Our members-at-large on Hawaii have been outstanding as individual workers on health fund drives, and all components have been most cooperative when called upon to assist in entertaining visiting national officers and committee chairmen. It has been very gratifying to have them attend Board meetings and the Fall Conference, to give us all a chance to get better acquainted.

Because of the capabilities and cooperation of all officers, chairmen, the office staff, and the Advisory Committee headed by Dr. Jerome Tucker, the year has gone smoothly and well, and I feel that our Auxiliary really merits its stature as attested by being chosen as the subject of the article in *M.D.'s Wife*. My heartfelt mahalo to you all.

MRS. GARTON E. WALL

Report of the Woman's Auxiliary

Your Reference Committee first considered the report from the President of the Woman's Auxiliary, and recommends that the report be accepted and a vote of thanks be given to the Auxiliary for its fine work.

Your Committee especially commends the Auxiliary on the Hazard House it exhibited at the Health Fair. It learned that this exhibit was subsequently copied by the San Diego County Medical Society whose Health Futurama, without a Hazard House, was the original inspiration for the Honolulu project. Other commendable Auxiliary accomplishments were the program promoting home safety and the AMA-ERF fund raising project. Well deserved recognition of Hawaii's outstanding Auxiliary was received in the March, 1966, issue of "MD's Wife." We were pleased to have Mrs. Garton Wall, the President of the State Auxiliary, at the hearing to elaborate on the many activities included in her report.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

WOMAN'S AUXILIARY

This year has been one of inactivity for the Woman's Auxiliary Committee. The experienced officers of the Auxiliary have not encountered problems requiring the advice of the committee and therefore have not felt the need to call upon the committee.

The Auxiliary reported, upon the request of the HMA, that the "Today's Health" magazine is being distributed to all high schools and colleges in the state and the University of Hawaii.

The chairman has questioned the role and actual need for the existence of this committee, but discussion with present and past officers of the Auxiliary confirmed that the committee is often of considerable value to the Auxiliary.

JEROME L. TUCKER, M.D.

Woman's Auxiliary

Your Reference Committee learned that there has been some question as to the exact function of this Committee. It was pointed out to us that the function of the Woman's Auxiliary Committee is to advise the Auxiliary on matters involving policy. The Committee recommends acceptance of this report.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

CAREERS

Initially this committee was responsible for the Hawaii Health Fair. After the preliminary plan, this function was transferred to a subcommittee of the Public Relations Committee.

The principal event of the year was the Fourth Annual Careers Day at which 126 students (including five from Kauai) were hosted by approximately 60 physicians on tours of various exhibits in some of our local hospitals. Preliminary planning included a luncheon meeting with the high school counsellors and luncheon meetings with each of the hospital staffs involved. This resulted in a better coordinated program. Participating physicians have given excellent suggestions which will be incorporated in next year's program.

Meetings of the University of Hawaii PreMed Society were attended and considerable help was given in program formation. This Committee has become an unofficial sponsor for this organization.

Three University of Hawaii students were nominated to receive scholarships of $300 each for undergraduate research or special study programs in the medical sciences. These scholarships were made possible by the Rama Watumull Fund.

Conferences and correspondence with Dr. Richard Blaisdell, Professor of Medicine, University of Hawaii, were pursued toward the goal of compiling a roster of Hawaii residents enrolled in medical schools or postgraduate training courses on the mainland. The idea of an annual party for accepted medical students and those medical students home on vacation was considered but not adopted at this time.

RECOMMENDATIONS: (1) That the annual Careers Day Program be continued and that sufficient additional funds be appropriated to pay the travel expenses for at least five students from each component county societies. (Roundtrip air fare from Kauai = $26.40; Maui = $26.40; Hilo = $40.20; and Kona = $37.20.)

JOHN R. STEPHENSON, M.D.

Careers

Your Reference Committee noted with interest the report of the Careers Committee and wishes to commend this committee on its excellent and well-organized programs for stimulating interest in medical careers.

Your Committee agrees with the intent of the recommendation to bring to Honolulu five students from each of the neighbor islands to participate in the annual Careers Day program. It does feel, however, that one-half the transportation costs involved in this project should be borne by the county society where the student resides, the other half to be covered by the HMA. Your Committee recommends approval of this recommendation as amended; i.e. that the program be continued with the same budgetary allocation as this year, plus one-half the amount requested to cover cost of bringing neighbor island students to Honolulu.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

PUBLIC RELATIONS

Public relationwise, the past fiscal year has been relatively quiet. The work of the subcommittees has been handled with efficiency and has become relatively routine in most respects. The subcommittee chairmen have performed their jobs efficiently due to their increased experience in their duties.

The Radio-TV subcommittee has added a new half-hour program on KHON-TV on Sunday. Some organizational difficulties occurred, but these are being smoothed out. This should become a popular and interesting program. Programs are pre-taped and having a member from outside the medical profession on the panel is valuable to the program and to PR and should be continued.

The News Media Subcommittee's work has gone very well. Our positive program proved especially sucessful during the tense period of negotiating with HMSA. Our positive effort of encouraging press conferences, I feel, paid off. The method of handling the news releases during these negotiations should be an example of the way they should be handled in the future. The newspapers, now, almost always come to Mr. Lytle or our committee for information regarding medical news and medical subjects. This line of communication has seldom been broken this past year. The public relations committee has reacted immediately and actively when a breach has occurred. These breaches, I am sure, will become less frequent.

The Health Fair has probably been the outstanding success of the year, both from the standpoint of public relations and health education. An organizational catalogue is being made. It is generally felt that health fairs in the future should be repeated, but probably not more than every two or three years. A definite decision regarding the timing of these fairs will be made within the next several months with the aid of community leaders.

Programs are running smoothly enough so that it is hoped less meetings will be necessary, and in the fiscal year to come, I would encourage continuing all present public relations programs.

RECOMMENDATIONS: (1) The subcommittees have requested budgets for their activities with which I am in accord except for that for News Media, which I believe should be increased to $250 in order that the award can be more significant. (2) In addition the over-all PR Committee will need the following which is based on the same figures as for the past year except that it is not planned to send anyone to the annual AMA Conference this year: (a) Counsel, $6,000; (b) Miscellaneous Newspaper Ads, $500; (c) MESA Dues, $10; (d) Miscellaneous Flyers, $150; (e) Miscellaneous Printing, $50; and (f) Travel, $250.

ANDREW C. IVY, JR., M.D.

Public Relations Committee

Your Reference Committee has already made a recommendation to approve the first recommendation. It also recommends approval of the budgetary requests set forth in No. 2. We note that the PR Committee will not be spending any money to send a representative to the annual AMA PR Conference in 1966.

Your Committee and all members of the HMA can take pride in the work of the PR Committee and its subcommittees. The relationship between the medical profession and the news media has improved considerably in the past few years due largely to the efforts and dedication of these hardworking committee members.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

News Media—Henry Yokoyama, M.D.

The purpose of the News Media Subcommittee has been twofold: (1) To maintain good rapport with the various news organs. (2) To disseminate health information. The first has been accomplished by removing the traditional suspicion the physicians had for the news media by increased personal contact with reporters and editors and constantly reminding them of our medical ethics. To the second intent, the committee has been responsible for a "Weekly News Release" (written by Hugh Lytle); "Keiki Care" (written by Gene Ahern); "Hawaii Doctor" (written by John Roberts); "Shijo Igaku Mondo" (a question-and-answer column in the *Hawaii Times* (written by Kazushi Tanaka, *et al*); "Medicine At Work" (in which the various physicians and their patients cooperate); and various other special feature items. Another pilot program to encourage physicians to write medical articles is on the agenda for possible weekly circulation in one of our dailies.

The policy of using the author's name on columns written by some physicians, such as anesthesiologists, was accepted by the Council. The use of physicians' names by reporters in regular news stories has been discouraged.

RECOMMENDATIONS: (1) That the Journalism Awards be expanded to include special merit awards for work that doesn't meet the criteria of the regular award, and that the total budget for this account be increased from $110.00 to $145.00 (to include higher cost of bowl and one additional bowl). (2) That the budget allocation for Press entertainment be increased from $50.00 to $100.00.

Addendum: After this report was written some unfortunate press releases appeared in the local press. To help avoid repeat occurrences, a notice was approved for the Newsletter which was designed to remind members that the assistance of the PR Committee is available for dealing with reporters.

News Media

Your Reference Committee would like to urge that all members of the Association take advantage of the services and experience of the Association's PR Committee in all matters relating to press releases, newspaper, radio, and TV interviews, and public statements.

Your Committee would also like to commend the News Media Committee on its excellent work. We note that the over-all Public Relations Committee feels that the News Media allocation for prizes be increased from $145 to $250. Your Committee concurs. Your Committee also recommends approval of the second budgetary request of $100 for press entertainment.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

TV-Radio—Walter Y. M. Chang, M.D.

The subcommittee on television and radio, after 18 months of negotiations, has instituted a new educational television program, "Doctors at Work," on Channel 2, on alternate Sundays. This was made possible by a grant of $3,000 from Merck, Sharp & Dohme for the purchase of medical films from the California Medical Association. There is no cost for a moderator on this public education enterprise. Prominent lay guests act as hosts. KHON-TV gives public service time for the program without cost to the Association. The only expense is a twice-a-month advertisement in the TV Guide. Hugh Lytle produces this.

The regular Sunday night program, "Call the Doctor," now in its fourth year, continues on KTRG-TV public service time. A paid moderator, Gordon Burke, presides. A small weekly advertisement in the TV Guide and a monthly film used as a visual aid are the only other costs of this popular program.

The Sunday, 15-minute radio program "Ask the Doctor" continues weekly on KGU, also on public service time. This educational feature has been running continuously for five years with Hugh Lytle moderating.

During the past year numerous radio and TV spots have been filled by doctors speaking on subjects ranging from clinical to political topics. Notable among these were 28 five-minute spots with Napua Stevens on KGMB-TV. Similarly, 20 five-minute spots and six one-hour programs were aired by doctors speaking over KTRG Radio on the weekly Filibuster program. These short spots ceased with the dropping of the programs. It is a valuable field for our operation. It will be developed further after the growing pains of the new TV program on KHON-TV have been controlled. Some problems caused by the lack of a professional moderator have been encountered, but the quality of the program has improved with each production. This improvement should continue.

RECOMMENDATIONS: For the coming year I recommend the following expenditures be approved:

(1) Moderator, Call the Doctor	$1,040
(2) Weekly 2" ads, TV Guide, Call the Doctor	600
(3) Bi-weekly 3" ads, Doctors at Work	400
(4) Postage	30
(5) Twelve special TV films at $40	480
(6) Miscellaneous	30
Total	$2,580

TV-Radio

Your Reference Committee is pleased to note the establishment of an additional TV program and hopes that it can be scheduled at a time that will reach a larger number of viewers. We note the Committee continues to improve and increase its TV and radio coverage of health matters of interest to the public. Your Committee recommends approval of the six budget items as requested.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

Japanese Speakers Bureau—Shigeo Natori, M.D.

This committee consists of HMA members who regularly participate in a Monday evening Japanese radio program (Station KOHO, Dial 1170) from 7:10 to 8:00 P.M. called "The People Speak." Monday evening is devoted to medical subjects and the physician participating first introduces a medical topic for 10 to 15 minutes and then answers a variety of medical questions which come in over the telephone. The program has a large audience and is one of the most popular audience participation programs. The purpose of this committee is to disseminate accurate medical information to a population segment which is being duped by several pseudo health organizations.

Japanese Speakers Bureau

Your Reference Committee took note of the national recognition this committee has had and commends its energetic members. We recommend acceptance of the report.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

Hawaii Health Fair—John R. Stephenson, M.D.

There were 68 exhibits at the Health Fair plus the continuous movies in the auditorium and the special movies in one of the side exhibit areas. Valita is not included in the 68 exhibits.

Financial backing for this undertaking was obtained from the Honolulu Chamber of Commerce ($5,000) and the McInerny Foundation ($3,000). If they could, exhibitors were asked to pay for the booths ($25 ea.), the rented chairs (10¢ each per day), tables (50¢ each per day), dividers ($1.00 each per day) and the electrical connections ($790.00 prorated as used). When additional funds were requested of McInerny, a budget of $9,077.39 was presented. It was anticipated at that time that $1,083.20 would be paid by exhibitors, leaving a total to be met by the HMA of $7,994.19. Actual costs came to $9,254.11 of which $1,433.70 was reimbursed by exhibitors. The excess of income over expenses was $179.59. One of the reasons the HMA undertook the Fair was to demonstrate the feasibility of such a project and to work out plans that could become the base for future Health Fairs on all islands, knowing that it is much more difficult to initiate such a project than it is to adapt a pattern that has already been developed.

The response to the Fair was tremendous. Approximately 50,000 people attended in the two days it was open. The Fair was officially open from 12 noon until 9:00 p.m., but it was impossible to keep people from coming in before the announced opening hour.

A questionnaire was sent to all exhibitors: 25 were returned. In response to questions relating to length and frequency, twelve thought the hours were just about right. Six felt the Fair should have opened earlier, three thought it should have closed earlier, and two thought it should have closed later. Six reported that the Fair's two-day exposure was about right, six thought it should be extended to three days, and three proposed four days. Thirteen thought the Fair should be held every two years, six thought it should be every two to three years, four thought it should be an annual event, and one suggested every four years.

All who reported said they would exhibit again. They felt they were adequately informed with the exception that a few felt the physical description of the booths was inadequate.

There was general agreement that the most worthwhile exhibits were those that involved audience participation and the least worthwhile were those which were not manned. Criticisms were few but suggestions for better handling of testing stations were numerous and included: seating arrangements for people waiting for tests, com-

bining blood grouping and diabetes testing, appointments, location of testing areas to avoid blocking aisles, coordination of all testing procedures into polyphasic screening, placing testing stations together in order that those waiting would not obscure other exhibits, grouping of related exhibits, fewer exhibits, more pharmaceutical exhibits, wider separation of voluntary health agency exhibits, more testing units, special areas for exhibits that appeal to children.

Exhibits singled out for special praise were: glaucoma testing, diabetes testing, heart disease testing, cancer of the lung, ophthalmologists' exhibit, CD's disaster exercises, Med Techs, artificial kidney, doctors' lectures and demonstration of techniques, NASA, poisonous plants, League for Nursing, open heart surgery, dermatologists' exhibit.

Additional exhibits and features suggested included the one that there should be food for the exhibitors, immunizations, PKU testing, merchants should set up household safety devices, Rh typing, visual acuity testing for children, hearing testing, more films in booths, one booth to record names and addresses on cards to be used by more than one testing station, numbers such as those given out at bakeries for people waiting to be tested, closed circuit TV.

One criticism not noted by exhibitors but which should be considered by the counties when they put on their Fairs is the need for adequate signs directing traffic to exhibits and to film areas. The loud speaker system at the information booth turned out to be a paging system for lost parents and did not accomplish its objective of directing people to special events. Valita was an extremely popular exhibit and worth all the trouble and expense attendant on getting the Bishop Museum to let her be moved. There were a number of misunderstandings which will probably make securing this exhibit another time most difficult unless there is a change of personnel.

The news media were very resistant to advance publicity but this problem should not be present at future meetings since the Health Fair's ability to attract large numbers of people has been proved. People who have had experience with similar projects noted that the participation of so many young people was unique. The publicity directed to the school children, and the flyers in particular, probably accounted for this.

The Fair could not have been accomplished without an unusual amount of cooperation and understanding on the part of physicians, exhibitors, and the splendid work of the HMA office staff. To all we extend our sincere appreciation for making our part so much easier and pleasant.

RECOMMENDATIONS: (1) That the HMA's PR Committee continue to encourage each of the counties to develop similar activities and that one county's Health Fair follow another's, starting with Honolulu County. (2) That a time other than Community Health Week (when all AMA exhibits are tied up on the mainland) be considered. (3) That the number of days and hours (at least for Honolulu County) remain unchanged. (4) That the counties seriously consider scheduling the Fairs every three years beginning in 1967.

Health Fair

Your Reference Committee wishes to commend the committee on the tremendous amount of work involved in this very successful event. It also recommends amending the recommendations as follows: (1) That each county have the responsibility for developing a health fair. (2) That the county health fairs be held in the same year and scheduled to take place consecutively without overlapping and that the neighbor island health fairs follow the Honolulu County Health Fair in order that they may take advantage of the exhibits. (3) That the health fairs be held at some time other than during Community Health Week. (4) That the health fairs should be held every three years beginning with 1967. (5) That it be suggested to Honolulu County that its health fair be planned for the same hours and the same number of days as the 1965 Health Fair.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

Message of the Month—William F. Moore, Jr., M.D.

During 1965-1966, the Committee composed and distributed eleven messages on health care: May, "Swimmers;" June, "People Interested in Surgery or Hearing Aids for Deafness;" August, "Those About Being Stung;" September, "Everybody Come To The Fair;" October, "People Who May Have Diabetic Relatives;" November, "People Accustomed to a Small Cough;" December, "Patients Who Are Wondering About Their HMSA Coverage;" January, "Hawaii Hearts;" February, "Senior Citizens—Their Friends and Relatives;" March, "Those Who Want to Live Longer;" and April "People With Harmful Suppressed Emotions." The 12th message was superseded by the HMA's message on the Gross Income Tax.

Lay response to these messages has been good as evidenced by the frequent requests by business firms for regular distribution to their employees and at least one favorable newspaper article. The committee is deeply indebted to the Woman's Auxiliary without whose faithful distribution services this program would have floundered.

The cost of four of these messages has been underwritten by community health organizations and pharmaceutical firms.

RECOMMENDATIONS: (1) The committee strongly recommends continuation of this public service program. (2) That a budget of $1,800 be allocated to cover eight messages.

Message of the Month

Your Reference Committee congratulates this Committee on the excellent work its members are doing. Your Committee urges that the few members of the Association who are not now using these inserts do so. Your Reference Committee recommends approval of both recommendations of this committee.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

Operation Pacific—Thomas H. Richert, M.D.

The past 12 months have seen little activity in Operation Pacific.

In May, June, July, and August we had a man in American Samoa. There have been no requests for service since those dates.

We remain in contact with Western Samoa through Dr. Charles Judd. It appears that during the next year some requests may come from Tahiti or Okinawa. This, however, will be via the University of Hawaii and its biomedical program in combination with Dr. Richard K. C. Lee's School of Public Health.

Operation Pacific

Your Reference Committee notes that this project is not so active as it once was but recommends that the committee continue to make itself available for coordinating physician relief in the South Pacific.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

PUBLIC RELATIONS COUNSEL

Doctors of Hawaii made at least 258 appearances on radio and television during the last 12 months. Many

others cooperated with the press by writing on medical subjects, briefing the press, checking news releases, or by subjecting themselves to interviews on subjects approved by the Hawaii Medical Association. Doctors representing the Honolulu County Society appeared at speaking engagements at the rate of eight or ten a month. Other County Societies also took part in this profitable activity.

Such exposure resulted in important health and medical education of the public. It also spread accurate knowledge of the medical profession which has been so lacking among many American people.

A large corps of experienced physicians now is available for radio, TV, and speaking appearances—in two languages. There has been an upsurge in activities of the Japanese Speakers Bureau which maintains a popular hour-long medical program weekly on Radio KOHO.

Medical writing by lay reporters is exceedingly high, due in part to interest in the annual contest for medical writers sponsored by the HMA. This year, for the first time, entries were received from a Japanese language newspaper.

The year's highlight of the public education activities of Hawaii's physicians, intensified just five years ago, reached a peak when Hawaii's first Health Fair was presented at Honolulu International Center on October 9 and 10, 1965. More than 50,000 people flooded into the center to view some 70 exhibits and to take advantage of the free clinical tests and examinations offered. The San Diego County Medical Society, in contrast, attracted a mere 10,000 to its exhibit. This event is worthy of repetition. The numerous agencies and hundreds of individuals who gave of their time can be counted upon for an enthusiastic response—if the event is not repeated at too frequent intervals.

The most important development in the Association's public education enterprise this year has been the institution by the Hawaii Medical Association of a new half-hour program, "Doctors at Work," on KHON-TV, Channel 2, which reaches all Islands of Hawaii. Details are in the report of the subcommittee on TV and Radio.

The medical profession today is called upon increasingly for advice in health and socio-economic matters. This has resulted from increasing participation of hundreds of physicians in activities that go beyond their status as healers.

Those who take part are thinking in terms not only of the present but of the future.

HUGH W. LYTLE

Public Relations Counsel

Your Reference Committee recognizes the dedication of Mr. Lytle and recommends approval of his report. We also note the excellent coverage this current meeting is receiving.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

MEDICINE & RELIGION

The whole person is composed of his physical, emotional, social, and spiritual parts. The well-being of the individual necessitates good health in all facets of his being.

The Committee on Medicine and Religion during the fiscal year 1965-1966 has been exploring ways in which doctors can best treat all facets of the individual, especially the individual's spiritual self.

A dialogue between doctors and the clergy was held in the Mabel Smyth Building, Tuesday evening, November 16, 1965. The Windward Theatre Guild dramatized a situation in which both the doctor and the minister were needed in treating the patient. Both doctors and ministers felt that closer cooperation between the two professions could lead to more adequate care of the patient in some cases.

A panel presentation on the chaplaincy program in the hospitals followed by small group discussions on various phases of the topic was scheduled on Tuesday evening, April 26, 1966. Doctors, clergymen, and hospital administrators were invited. The consensus was that the chaplaincy program is an important and worthwhile function of hospitals.

The premise that patients need to be treated as whole persons is widely accepted. The committee shall continue to discover ways of giving the individual's spiritual self adequate care.

Future plans for the committee include a series of small bull sessions designed to teach the clergy medical terminology and protocol, establish a medical clergy consultation sheet for use in hospitals, and further encourage hospital chaplaincy programs. Dr. Paul McCleave is expected in October and one of the larger meeting will be planned at that time. Methods for expanding the program to the neighbor islands are also under consideration.

RECOMMENDATIONS: (1) That the Hawaii Medical Association go on record as strongly supporting the hospital chaplaincy program and encouraging its furtherance in Hawaii. (2) That a budget be allocated to the committee for carrying out its programs; to wit, $30.00 for two large evening meetings; $60 for monthly luncheon meetings; $160 for travel expenses of one committee member to each of the other counties; $150 for developing and printing a handbook for the clergy which will include consultation protocol, do's and don'ts, a glossary, etc.

SAU KI WONG, M.D.

Medicine and Religion

Your Reference Committee noted with interest the pioneering work the Committee is doing in bettering the relationship between the physicians and the clergy in order to improve the total care of the patient. We accept the recommendations of the Committee with the amendments as noted: (1) The Hawaii Medical Association go on record as strongly supporting the principle of the hospital chaplaincy program. Your Committee further recommends that this program be designed to meet the needs of all faiths. (2) That the budget for the Committee be set at $30.00 for two large evening meetings, $160.00 for travel expenses for one Committee member to visit each of the other counties, and $150.00 for developing and printing a handbook for the clergy. Your Committee further recommends that the item of $60.00 for monthly luncheon meetings be deleted. It is also the recommendation of your Committee that the proposed handbook for the clergy be reviewed by the Council before it is published.

ACTION:

The Chairman moved adoption of this portion of the report. After determining that the neighbor islands did in fact want the committee members to visit them, it was adopted.

QUACKERY

The Quackery Committee of the Hawaii Medical Association held its first meeting in July, 1965. The committee was formed at the request of the President of the Hawaii Medical Association. It has no budget. As of April 11, 1966, it has met a total of seven times.

The following items have been referred to the committee and the action taken indicated:

The question of definitions of quackery and various cults coming under Medical Practice Act of State of Hawaii were discussed. The definition of "quackery" as formulated by AMA was adopted as the committee's working definition. Definitions of various cults, as given in 1955 Revised Laws of Hawaii, were adopted.

The question of cooperation with BBB was raised. Mr. Billam-Walker was invited to attend a meeting. No reply was received.

The question of cooperation with Department of Health was resolved by inviting Mr. Fraga to attend all meetings to provide liaison. Mr. Fraga has become an actively participating part of the committee.

The question of non-M.D.'s using the Physicians' Exchange (i.e., a local hypnotist gave the Physicians' Exchange number in an advertisement) was referred to management of the Mabel Smyth Bldg. The hypnotist dropped from the listing.

Questionable advertisements in local newspapers (Busteen, Allergimist, Aloha Health Foods, asthma cures) were referred to Department of Health via Mr. Fraga for investigation.

The case of an R.N. advertising colonic irrigations in the paper was referred to the Department of Health.

The problem of theft of Rx blanks from doctors' offices or bags was studied. The Department of Health advised that Rx blanks should not have narcotics numbers imprinted on them. The Department of Health is considering issuing serially numbered blanks for use in prescribing narcotics.

The question of controls on x-ray units in the State was brought up. The Department of Health informed the committee that all such units are regularly inspected and are under good control.

The question of nonmedical persons ordering laboratory work (i.e., hair-grower ordering serology) was referred to the Department of Health. Under present laws, anyone can go to a commercial laboratory and obtain blood tests.

A hearing aid advertisement was questioned and the distributor was invited to demonstrate product, which he did to satisfaction of committee. All claims were found to be within the scope of legality.

Claims for "Preparation H" in local advertisements were determined to be within the scope of the law.

The committee and the Department of Health were alerted to a local masseur's signing of Workmen's Compensation forms.

Local physicians' dispensing of large amounts of protein supplements was discussed. Since such substances are not harmful, no action can be taken.

"Facial Lilt" for $200.00 is sold with glamor wigs and the product is presently under investigation by the Department of Health.

An editorial from AMA regarding quackery was approved for publication in HAWAII MEDICAL JOURNAL.

For the next meeting, the Editor of the *Honolulu Advertiser* has been invited, and it is hoped that a clearer liaison can be established between the press and the physicians and less pseudo-medical reporting will result. It is hoped that anti-quackery oriented articles will be forthcoming.

RECOMMENDATIONS: (1) That the committee continue in its present functions as a liaison between the State Department of Health and the HMA for the investigation of questionable medical and pseudo-medical activities.

W. H. SAGE, M.D.

Quackery

Your Reference Committee concurs with the recommendation that this relatively new committee continue its present functions and recommends acceptance of the report.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

AMA EDUCATION AND RESEARCH FOUNDATION

This committee, whose purpose is to encourage physicians and other individuals to give to medical schools and research through the AMA-ERF, was credited with $2,908.00 in contributions for 1965. Again the Woman's Auxiliary to the Hawaii Medical Association helped by raising and contributing $421.30. A group from the State Board of Health donated a memorial of $37.00 for Mrs. Walter Quisenberry.

As a signal event, the National AMA-ERF committee donated for the first time a check of $10.00 to the new University of Hawaii Medical School and this will be accepted by Dr. Windsor Cutting, Medical School Dean, at the 1966 Annual Meeting. This donation to our medical school shows that it is coming of age. The following is a breakdown of the contribution. The figures in parentheses indicate number of contributors. In the physician category, 97 of the 113 contributors were from Honolulu County.

Report of Contributions to AMA-ERF for 1965

	Physicians	Woman's Auxiliary	Medical Orgs.
Specified Medical Schools	$1,864.00 (59)	$373.00 (31)	
Unspecified Medical Schools	40.00 (4)	36.00 (6)	
Loan Guarantee	532.00 (31)	12.30 (2)	
Biomedical Research			
Unrestricted	472.00 (19)		$37.00 (1)
Total	$2,908.00 (113)	$421.30 (113)	$37.00 (1)

We are sure as are you that many physicians in this State contribute to medical schools directly without going through AMA-ERF and further education work needs to be done along this line so that physician contributions will have greater impact.

DOUGLAS B. BELL, II, M.D.

AMA-ERF

Your Reference Committee notes the figures submitted and recommends acceptance of this report.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

REPORT ON AMA'S FIRST NATIONAL CONGRESS ON MEDICAL ETHICS*

Although this meeting may have produced more questions than answers, it did lead to some sharing of ideas that should be helpful to the several states. It would appear, after making comparisons with committee functions in other areas, that Honolulu County Medical Society's Medical Practice Committee is functioning very effectively.

There was considerable discussion about the legislation in the State of Washington and its approach to medical discipline and perhaps this type legislation should be explored in Hawaii.

A discussion on the vulnerability of grievance committee members to libel suit led to the conclusion that these physicians should make certain that they have ample insurance coverage.

Considerable time was devoted to a discussion of fee splitting. There appears to be no good answer to this other than that the patient should not be exploited and that any division of fees should be known to all parties concerned. There does seem to be a real and growing need for an equitable division of fees in view of the large number of individuals involved in modern handling of medical problems.

Although there should be no difference in standards across the country, there is no unanimity in what the different states consider breaches of ethics. The many grey areas include dispensing of drugs, laboratory services, utilization of laboratory facilities, etc. There was a feeling by some that the AMA has not been completely helpful in giving aid to the states where problems develop because many of its decisions are couched in quite broad language.

* Held in Chicago on March 5 & 6, 1966. HMSA representatives were S. D. Allison and Scott Brainard.

RECOMMENDATIONS: (1) That the Legislative Committee study the State of Washington's Medical Disciplinary Act. (2) That consultation be effected with the HMA's insurance carrier and information obtained relative to recommended coverage to protect members of grievance committees who might be sued for libel, and that this information be disseminated to the various county societies.

SAMUEL D. ALLISON, M.D.

Ethics Congress

Your Reference Committee notes that although two HMA members attended this Congress, the report submitted was not a joint report. We recommend acceptance of the report and approval of its two recommendations.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

DISASTER

No items were referred to the Disaster Committee for action. The committee held several meetings in preparation for the Disaster Hospital exhibit and demonstration at the Health Fair. A format was developed which proved effective in demonstrating mass casualty care to the general public, and will be useful for subsequent demonstrations with only minor changes.

A program continued from the previous year consisted of symposium discussions with various health and administrative agencies to define the role of organized medicine and to discuss basic medical principles, stockpiling, first-aid training, and supportive functions required of the community. This proved to be an excellent method of developing interest and for promoting the Medical Self-Help Training Program. The next step is now in the process of development—a Citizen's Advisory Committee on Medical Self-Help and Red Cross First Aid Training, with guidance provided by the State Department of Health. Emphasis on such training will be initially directed towards industry and State government departments.

Reports were received only from the Honolulu and Hawaii County Disaster Committees with regard to activities undertaken in the past year. A systematic record of disaster exercises undertaken by Hawaii hospitals or programs of constituent societies could not be developed due to inadequate communication and apathy.

The HMA was represented at the 16th National Conference on Disaster Medical Care in Chicago and (for the first time) at the AMA Regional Conference on Disaster Medical Care in San Francisco. Many topics discussed at these meetings are currently under study in Hawaii, including radio communications for hospitals and better training programs for such persons as are likely to be initially involved in providing disaster aid.

RECOMMENDATIONS: (1) That the HMA seek closer affiliation with the western states (OCD Region 7 & 8) Interstate Council on Disaster Medical Care in the Interstate Council for strengthening local programs and for the development of a mutual assistance agreement.

(2) That the HMA urge further steps towards the enactment of "Good Samaritan" legislation in view of AMA interest in obtaining uniform laws (a) to relieve physicians of liability from rendering treatment at roadside accidents, and (b) to facilitate interstate mutual assistance in time of disaster.

(3) That the HMA urge legislation throughout the State which would make congregation of spectators at a disaster scene illegal. Numerous examples have been cited where such congregation has vastly magnified the disaster problem and with increasing traffic density in Hawaii such public reaction to a disaster would undoubtedly impede rescue operation with tragic consequences.

(4) That the HMA bring pressure in the large general hospitals to cooperate in the development of a radio communications network to tie in with the existing Berkheimer Tunnel, OCDA, Mabel Smyth, and ambulance system. Emphasis can be made in the practical full-time usefulness of such a communications network, as well as its obvious emergency functions.

(5) That the HMA Disaster Committee broaden its functions to assume a leadership role in organizing and coordinating all health professions for more effective disaster planning. Representation on the committee of each of the allied medical professions, American Red Cross, hospital administrators, and from the fields of public health and health education is needed for meaningful future planning. The present liaison function of the committee is felt to be restrictive, and a broader definition of activity is requested if the medical profession is to assume its proper responsibility *before* as well as *when* disaster strikes.

EDWARD BOONE, M.D.

Disaster

Your Reference Committee recommends approval of recommendations Nos. 1 and 5. It concurs with the legislative recommendations made in Nos. 2 and 3 and recommends that these matters be referred to the Legislative Committee for implementation. It further recommends that in the first sentence the words "similar to Los Angeles County" be inserted after the word "illegal." In No. 4 it is recommended that the words "strongly urge" be submitted for "bring pressure in."

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

HAWAIIAN ACADEMY OF SCIENCE

On April 12 this committee met for what is believed to be the first time. In the past the chairman took on the responsibility of selecting winners at the Hawaii Science Fair. No other activities were undertaken. This past year the chairman enlisted the aid of two other members to perform this function. The future role of the committee has been discussed and it is felt that further study is indicated.

RECOMMENDATIONS: (1) That all physicians be encouraged to present papers at Hawaiian Academy of Science meetings. (2) That $150 be allocated in order that the Association may continue to back the Science Fair to the same extent as in past years. (3) That the committee be instructed to develop definite criteria for judging Science Fair entries prior to next year's Fair. (4) That the chairman and two committee members be assigned the duty of judging Health Fair entries. (5) That the Association representative on the Inter-Society Science Education Council be a member of this committee and that his term be for a period of three years. (6) That this committee meet at least twice a year.

RAYMOND M. TAMURA, M.D.

Hawaiian Academy of Science

Your Reference Committee congratulates this year's Committee for developing a constructive program and recommends approval of all six recommendations.

ACTION:

The Chairman moved adoption of this portion of the report. It was adopted.

AWARDS

This committee met and discussed the choosing of a candidate for the Community Service Award which is sponsored by the Robins Company. One physician was selected and the name was presented to the President of the Hawaii Medical Association.

Another Award was discussed for a retired physician who will also be honored at the Annual Meeting.

RECOMMENDATIONS: (1) That in the future the various county societies be canvassed by letter in advance of the committee meeting and a follow-up reminder be given

well in advance in order that each Society will be given every opportunity to present the candidates of its choice.

No budgetary request is made by this committee.

R. Varian Sloan, M.D.

Awards

No action was taken on this committee report.

KAUAI COUNTY

The Kauai County Medical Society held eleven regular monthly meetings and one special meeting during the past year.

A November dinner meeting was held with representatives of HMSA to clarify our relationship with HMSA and to try and negotiate payments based on the Relative Value Schedule. Negotiations reached an impasse. Kauai County Medical Society elected to terminate the master contract with HMSA at its February meeting.

A county utilization committee has been appointed.

Y. Miyashiro, M.D.

HAWAII COUNTY

The Hawaii County Medical Society had eleven professional meetings and one social meeting during the year 1965. Average attendance was seventeen physicians.

There were three areas of major concern to the membership:

(1) HMSA. Hawaii County voted to terminate its master contract with HMSA. Approximately two-thirds of the membership also terminated their individual contracts. The Society felt that the major area of conflict was the refusal of HMSA to accept the Medical Society as a bargaining agent for physicians.

(2) Medicare. Of particular concern in the matter of Medicare is the establishment and function of the Utilization and Review Committees. As yet it is not clear to the entire membership what the general impact that Medicare will have upon the practice of medicine and the specific influence the Utilization and Review function will have.

(3) Act 97. The function of Hilo Hospital under Act 97 is still not clear. Hilo Hospital of course is the only major hospital available to the majority of the members of the County Society. There is no private or other nongovernmental hospital on this island, and so this matter is of extreme interest to the entire membership.

The County Society did survive the year intact and solvent.

Ed B. Helms, M.D.

MAUI COUNTY

The year 1965 was essentially routine for the Maui County Medical Society, except for the problem of negotiations with Hawaii Medical Service Association. However, the scientific portion of our program was quite successful. We were blessed with the presence of several men of profession calibre or standing to bring to us discussions in their various fields.

We were grateful for the help of Drs. Lum, Mills, and Waite, and Mr. Yuen in bringing to us a better understanding of the HMA—HMSA negotiations. The majority of our members took a firm stand supporting the actions and recommendations of the HMA negotiating committee.

Cooperation between Honolulu County and Maui County was good in the HMSA problem, but there still exists a great need for improvement in understanding and working relationship between the two counties on a state level. It is hoped that this problem can be seriously considered in order to minimize further misunderstanding between the two counties.

M. L. Hanlon, M.D.

HONOLULU COUNTY

The Honolulu County Medical Society wishes to report on its activities since the last meeting of the House of Delegates in May of 1965.

Following the annual meeting of the Hawaii Medical Association in 1965, and in accordance with the mandates of the House of Delegates, the HCMS took immediate steps to implement the recommendations of the House of Delegates in regard to the relationship of the medical profession with Hawaii Medical Service Association.

The membership of the Society was polled and in the final analysis, over 90 per cent of the physicians participating in HMSA, gave the Society the power of agent to terminate their individual participation agreements. In September, the Society informed HMSA that the master contract between HCMS and HMSA would terminate January 13, 1966. In December, the authority to terminate the individual agreements was invoked, with all individual agreements to terminate simultaneously with the master contract.

Negotiations for contract terms had been the responsibility of HMA and the negotiating subcommittee of the HMA Medical Care Plans & Fees Committee and this relationship was continued.

At the present writing, there is no contract with HMSA and it is unknown how many physicians are participating, but it is assumed that the number is negligible. The Society has been effectively united in its stand.

The Foundation for Medical Care is now in an operative condition after several years of quietude. A carrier has been committed to underwrite Foundation plans and rapid steps are being taken to implement this most desirable program. Approximately 500 physicians have indicated their desire to participate in the Foundation plan.

The building program of the Society is moving rapidly. Medical Plaza, Inc., the developer of the proposed office building, has been successful in getting necessary amendments to the City Building Code to enable the building to be built without a variance. Initial financing is underway, test borings to determine the nature of the underground strata have been completed and design work is in progress. Prospectus documents are in the process of preparation and it is hoped that the necessary equity capital to be raised through the sale of stock will be completed by mid-summer.

Medicare has placed an additional burden on the Society through the need for the development of utilization and review committees to meet the need for the professional direction of the program. The preliminary operating plan of the County Society Committee has been filed with the Health Department.

The Bureau of Medical Economics has expanded its services to the physicians and to enable it to meet its growing requirements, additional space has been arranged. This will release badly needed space in the Mabel Smyth Building for the offices of MPI and the Foundation.

Regular committee activities have continued. One of the most outstandingly effective activities has been the Speakers Bureau under the Public Relations Committee. The Medical Practice Committee has become through its effective work, the sounding board for practically all attorneys handling threatened malpractice suits. The Diabetes Detection Drive was successful. This year it operated with the help of the Medical Assistants Association and the Woman's Auxiliary without the support of the State Health Department.

A new and improved program for the membership in the time loss insurance field was developed and is now available to all.

The finances of the County Society have been stable without an increase in the dues.

The programs at the regular membership meetings have been successful in producing a very satisfactory attendance.

Membership has reached well beyond the 600 mark, and is continuing to increase each month.

Detailed reports of the work of our many committees is available for 1965 in our annual report.

John J. Lowrey, M.D.

County Reports

Your Reference Committee was pleased to note all four county reports. With reference to the Hawaii report, Dr. Quisenberry appeared before the Committee and explained that the Hilo Hospital has a new administrator and that the relationship with physicians seems to be satisfactory. He advised that although the Hilo Hospital now operates under a contract with the Department of Health, the change affects only the fiscal set-up.

Your Committee was also pleased to consult with Dr. Marion Hanlon of Maui. Dr. Hanlon pointed out the need for continued efforts to improve the liaison between the various county societies and the State association. In this regard, your Committee urges that the policy of increased visits of the officers and members of various committees to the neighbor islands be continued.

ACTION:

The Chairman moved to adopt this portion of the report. It was adopted.

President's Report, Items No. 5, 6 and 8

Your Reference Committee does not feel that any appointment should be for more than three years.

ACTION:

The Chairman moved to adopt this portion of the report. It was adopted.

President's Report, Item No. 10

Your Reference Committee had no report to discuss and recommends that the incoming administration check to find out when and why these appointments were made.

ACTION:

The Chairman moved to adopt this portion of the report. It was adopted.

RESOLUTION NO. 11

Re: Regional Medical Libraries

WHEREAS, The Congress has passed The Medical Library Assistance Act of 1965 authorizing the Surgeon General of the Public Health Service to designate certain libraries as regional medical libraries; and

WHEREAS, The bill authorizes monies for grants to assist such designated libraries to develop this function; and

WHEREAS, The National Medical Libraries Assistance Advisory Board is encouraging community discussion concerning the designation of a regional medical library; and

WHEREAS, The Hawaii Medical Library has long fulfilled this function in the community and meets such requirements as are stipulated in the Act; and

WHEREAS, Grant monies will help greatly in providing a higher level of medical library service to the community particularly the nonphysician portions; now therefore, be it

Resolved, That the Hawaii Medical Association endorse the Hawaii Medical Library in its efforts to be designated regional medical library for the State of Hawaii.

Submitted by GROVER H. BATTEN, M.D.

Resolution No. 11—Re Medical Libraries

Mr. President, I move that Resolution No. 11 be adopted.

ACTION:

The Chairman moved that this resolution be adopted. It was voted to adopt this resolution.

It was voted to adopt the report as a whole.

Mr. President, your Reference Committee would like to thank the people who appeared before it. We would also like to thank Mrs. Phyllis Hashimoto of the HMA staff for her assistance and diligence in helping with the preparation of this report.

NOMINATING

The Nominating Committee of the Hawaii Medical Association has completed its meetings and has prepared the following slate of officers for the Hawaii Medical Association for 1966–1967:

President-Elect.....*B. A. Richardson*
Secretary (two-year term).....*R. Varian Sloan*
Noboru Oishi
Councilors from Honolulu.....*Bernard Fong*
(three-year term) *William H. Wilkinson*
Two to be elected

I wish to thank the Committee for being so patient in selecting the above slate.

CARL B. MASON, M.D.

Nominating Committee

There was a plea that only those men who would really work and start their deliberations early be selected. The hope was also expressed that all members would be given an opportunity to participate.

ACTION:

The President asked for nominations from the floor. Grover H. Batten was nominated for Councilor from Honolulu.

The following tellers were appointed: Robert A. Miyamoto, Thomas P. Frissell, Yonemichi Miyashiro, Clifford F. Moran.

Nominations were sought for the Nominating Committee. The following were nominated: Charles S. Brown, J. I. F. Reppun, Herbert G. Pang, Coolidge S. Wakai, R. F. Shepard, Robert P. C. Ho, Robert A. Miyamoto, Burt O. Wade, Clifford F. Moran.

* * *

The results of the election were announced as follows:

President-elect.....*B. A. Richardson*
Secretary.....*R. Varian Sloan*
(two years)
Councilors from Honolulu.....*Bernard W. D. Fong*
(three years)
Grover H. Batten
(three years)
Nominating Committee.....*Charles S. Brown*
Robert P. C. Ho
J. I. F. Reppun
R. F. Shepard
Coolidge S. Wakai
Robert A. Miyamoto
(Hawaii)
Burt O. Wade
(Kauai)
Clifford F. Moran
(Maui)

NEW BUSINESS

Consent of the House was secured to introduce a motion to be made by R. Varian Sloan.

ACTION:

It was voted that the House go on record as giving a rising vote of thanks to Dr. Ando for spending his time with it this afternoon to guide the House in its deliberations.

Dr. Tomita asked for the floor. He thanked the House for the vote of confidence it had given him in allowing him permission to reorganize the Association's committee structure. He said he would at all times keep in mind the definitions of the committee functions which the House had indicated it favored but upon which action was deferred. He explained that newly adopted Bylaws have to be submitted to the Treasurer of the State of Hawaii and he had asked for deferment in order that the Bylaws when changed might include the reorganizational chart.

The meeting was adjourned at 6:05 P.M. ■

RANDAL A. NISHIJIMA, M.D.
Secretary

HAWAII TECHNOLOGISTS' BULLETIN

Official Publication of the Hawaii Society of Medical Technologists

Editor: STELLA YOSHIDA, U. S. Army Tripler Hospital

1966-67 HSMT Officers

President.....Elaine Chang, MT(ASCP)
Board of Agriculture and Forestry

President-elect.....Gilbert Gima, MT(ASCP)
Wahiawa General Hospital

Recording Secretary.....Gretchen Asato, MT(ASCP)
Hawaii State Hospital

Corresponding Secretary.....Charles Ichioka, MT(ASCP)
Kaiser Foundation Hospital

Treasurer.....Satoru Hijirida, MT(ASCP)
Pawaa Medical Lab.

Board of Directors.....Edith Eckstein, MT(ASCP)
Past President
Tripler Army Medical Center
Kaname Saito, MT(ASCP)
Straub Clinic
James Yano, MT(ASCP)
Kaiser Foundation Hospital

Standing Committee Chairmen

Constitution–Bylaws and Legislation.....James Yano, MT(ASCP)
Kaiser Foundation Hospital

Civil Defense.....Leslie Nakashima, MT(ASCP)
Dickson-Bell Clinic

Education.....Gertrude Ching, MT(ASCP)
Straub Clinic

Finance.....Thomas Sodetani, MT(ASCP)
Kuakini Hospital

Membership.....Kimie Tarasawa, MT(ASCP)
Ewa Hospital

Recruitment.....Elizabeth Hughes, MT(ASCP)
Hawaii State Hospital

Scholarship Trustees.....Ronald Miyakawa, MT(ASCP)
Waimano Home
Gilbert Gima, MT(ASCP)
President-elect
Wahiawa General Hospital
Grace Kagawa, MT(ASCP)
Dr. Oishi

Publications.....Louise Wulff, MT(ASCP)
University of Hawaii

Planning and Scope.....Phyllis Sonoda, MT(ASCP)
Queen's Hospital
Lorene Leong, MT(ASCP)
Queen's Hospital

Convention.....Dorothy Matsuo, MT(ASCP)
Pathology Associates Med. Lab.

Representative on the Lab. Tech. Licensing Advisory Board.....Masaji Nakagawa, MT(ASCP)
U. S. Public Health Service

Job Placement.....Felice Kaulukukui, MT(ASCP)
Maluhia Hospital

1966-67 Interning Students

Kaiser Medical Foundation Hospital
Norma Guvieres — Alan Watanabe

St. Francis Hospital
Caroline Young — Leslie Izuwa

Queen's Hospital
Linda Hiranaga — Sheila Ouchi
Helena Chun — Shirley Nakamoto

Kuakini Hospital
Linda Nishihira — Richard Tamura

Tripler Army Medical Center
Karen Taniguchi — John Larson
Muriel Toma — Sgt. Joe Roberts
Joyce Anahori — Thurston Matsuura
Miriam Haitsuka

President's Message

Looking back on the past year, HSMT should feel a good sense of accomplishment. Some of the events responsible for this feeling included the Ortho Blood Bank Seminar, the immunology course given by Dr. Mitsuo Yokoyama, and the very successful Health Fair. And for the first time, HSMT was able to announce a slate of officers thirty days before election. It is hoped that we can continue to succeed as well in the coming years.

The challenges facing HSMT are numerous, and we must meet them. Hawaii, like the rest of the nation, is faced with a shortage of qualified medical technologists. We have been plagued with this problem and it will continue to bother us for a long time to come. Therefore, HSMT will have to intensify its recruitment efforts. We need to offer the high schools more information about careers in medical technology. We need more medical technologists who are willing to speak to the high school students to sell them on a career in medical technology. With the initiation of the five-year

curriculum at the University of Hawaii, it will be even harder to recruit students into our profession. We need more public exposure, and we can get it by continuing with the Health Fair and exploring the possibility of participating in the State Fair. Educating the public is everyone's business, and not just the job of the recruitment committee.

In the report of the membership committee it was noted that of the eligible persons, only 40% are members of HSMT—roughly 100 medical technologists. If everyone makes an effort to bring in one new member, we can truthfully say that we represent the majority of the laboratory workers in Hawaii. Thus, when we attempt to gain our own licensing board we will have another strong point to further our cause.

Obviously all of these things require time, effort, and money. Money, HSMT can somehow manage to obtain; but, time and effort, you individual medical technologists will have to provide. ■



BLEMISHES?

COVERMARK conceals all skin discolorations . . . birthmarks, brown & white patches, broken veins, tattoos, burns, scars, on any part of the body. COVERMARK is also unexcelled as an overall makeup . . . will not rub or flake off. Waterproof and Sunproof.

Lydia O'Leary
OF HAWAII
ALA MOANA CENTER—STREET LEVEL
PHONE 993-288



CUTEST UNIFORMS

Where Fashion is Foremost with Women in White

GOOD SERVICE IS UNIFORM WITH US

★

Our Two Locations are at

1969 S. KING ST. • PHONE 964-886

1206 ALA MOANA CENTER
PHONE 964-868

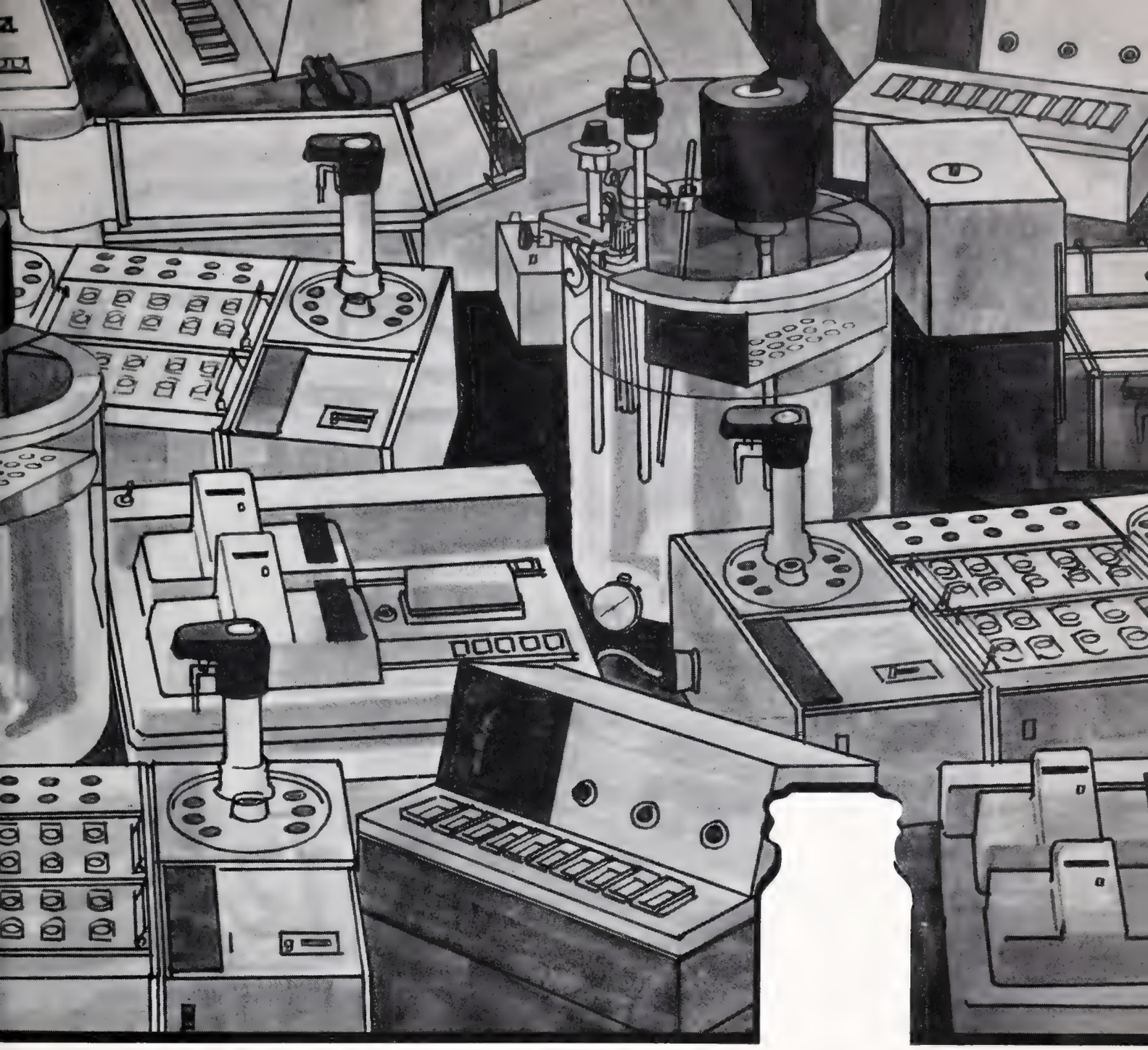
★

We Carry All Name Brand Uniforms and Also Doctors' Jackets and Smocks

★

We Specialize in Custom Made Uniforms

BANK OF HAWAII CHARGE



a perfect fit

Simplastin fits automated systems to a "T."

"T" for thromboplastin, that is....The many characteristics of thromboplastin which might alter the prothrombin time are kept under rigid control when Simplastin is your reagent. Size and number of suspended particles, pH and ionic strength—each of these factors is precontrolled to the exact point of optimum enzyme activity.

Furthermore, Simplastin is standardized against the plasma of patients on anticoagulant therapy, as well as against normal human plasma. As a result, your readings are consistently reproducible from vial to vial, lot to lot, and in both the normal and therapeutic range.

More laboratories in the U.S. and Canada use Simplastin than any other reagent for prothrombin determinations, whether manual or automatic.

Supplied in 6, 20, and 50 determination sizes.

Simplastin®
thromboplastin calcium



GENERAL DIAGNOSTICS DIVISION

WARNER-CHILCOTT LABORATORIES DIV., MORRIS PLAINS, N.J.

GDJ-2475

INDEX TO VOLUME 25

Subject and Title Index

A

Abdominal aneurysm: graft replacement vs. nonsurgical therapy 398
Ancient Hawaiian medicine, evaluation of effectiveness 223
Aneurysm, abdominal: Graft replacement vs. nonsurgical therapy 398
ruptured abdominal: report of four cases 464
Anti-V and anti-VS group antibodies found in the Honolulu area, further studies of 385

B

Beta hemolytic streptococci, in throat swabs, three year study 309
Biocenose, the home as a: children, pets and disease 127
Blood groups, immunoglobulins and isoagglutinins in multiple myeloma 106
Book Reviews 54, 168, 248, 334, 412, 480
Bureau of Medical Economics 48, 162, 247

C

Cancer detection, cytology, valuable tool in 318
Chiropteran (bat) rabies in North America 149
Child abuse in Hawaii 395
Children, pets and disease: the home as a biocenose 127
Circulatory collapse associated with defective catecholamine metabolism 101
Collection and utilization of vital and health statistics in Hawaii 36
Coronary disease and hypertension in Hawaii 235
Corynebacterium diphtheria septicemia, case report 31
County Society Reports 51, 252, 337, 410, 477
Cytology in cancer detection 318

D

Death, disease, and property taxes 34
Diphtheria, case report 31
Duodenal ulcer, selective vagotomy, antrectomy, and gastroduodenostomy for 25

E

Editorials
Book Review: Ferment in Medicine 473
Dispensing the samples 402
HMSA and the court of public opinion 330
HMSA and the doctors 244
Medicare and the physician's responsibility 160
Medicare: What to do about it 161
Parameter 402
The Aloha United Fund 472
The AMA fights quackery 331
The medical school is coming 42
Town and gown: a partnership 43
Enteropathogenic bacterial pathogens among hospitalized children 118
Escherichia coli infections, antibody response 137
Epidermal necrolysis, toxic: case report 468

G

Glucose-6-phosphate dehydrogenase deficiency in hemoglobin H disease 112

H

Hawaii
Academy of General Practice 47, 165, 249, 332, 404, 476
Calendar 66, 180, 279, 354, 428
child abuse in 395
collection and utilization of vital and health statistics in 36
coronary disease and hypertension in, racial distribution in 1,167 cases 235
Health Fair participants 51
medical association 253, 411, 482
streptococcal survey in: study among unselected children with respiratory infections 312
Hawaii Technologists' Bulletin 78, 172, 260, 344, 418, 523
Health departments, the changing role of 134
Heart disease, epidemiological aspects of: The Honolulu Heart Program 231
Hemoglobin H disease, glucose-6-phosphate dehydrogenate deficiency associated with 112
Hematological disorders in the Honolulu area 106

I

Idiopathic hemorrhage from ovarian artery: case report 470
Intracerebral virulence of salmonella typhi strains in chicks 154
In Memoriam—Doctors of Hawaii 46, 164, 246, 333, 406, 474
Arai, Katsutaro 333
Broadrup, George Lincoln 164
Christensen, Waldeman Howard 246
Clarke, Howard 406, 474
Hagood, Rufus H. 406
Hanchett, Alsoberry Kauma 46
Hansen, Charles Ola 164
Jacobson, Jacob Robert 255
Kainuma, Richard Toshio 254
Kemp, Dorothy Hope 53
Leas, John Augustus 474
Mack, Merton H. 338
Mobbs, Bertie 46
Saunders, Cecil A., Jr. 255
Schattenburg, O. Lee 333
Schnack, Adolph George 52
Sexton, L. L. 415
Straub, George Francis 478
Sutliff, Frank Bernard 407
Takahashi, Tokue 164
Webb, George T. 246
Withington, Paul 414

M

Maternal and Perinatal Death Study 49, 405
Metabolism, circulatory collapse associated with defective catecholamine 101
Myeloma, multiple studies of blood groups in the Honolulu area 106
Myeloma-type globulin in two blood donors 145

N

New Members 50, 166, 250, 336, 408, 477
Notes and News 52, 169, 254, 338, 414, 479

O

Obituaries 52, 254, 388, 414, 478
Outpatient schizophrenic, a numerical index for 323
Ovarian artery, idiopathic hemorrhage from 470

P

President's Page 41, 159, 241, 329
Presidential Address 461
Purpura, thrombotic thrombocytopenic 93

R

Reports and Snorts 16, 216, 298
Respiratory infections, streptococcal survey in Hawaii 312
Ruptured abdominal aneurysm: report of four cases .. 464

S

Salmonella typhi strains 154
Schizophrenic, outpatient, a numerical index for 323
Selective vagotomy, antrectomy, and gastroduodenostomy for duodenal ulcer 25
Slides, re-examination of 114
Statistics, vital, and health in Hawaii 36
Streptococcal survey in Hawaii 312

T

This Is What's New! 45, 163, 245, 335, 403, 475
Throat swabs, beta hemolytic streptococci in 309
Thrombic thrombocytopenic purpura 93
Toxic epidermal necrolysis: case report 468
Toxoplasmic antibodies in Southern California and Polynesia 141

U

Ulcer, duodenal, selective vagotomy, antrectomy, and gastroduodenostomy for 25

Author Index

Bassett, David R. 235
Benedict, Albert A. 145
Bennett, Charles G. 36
Bicoy, Puncho 114
Bintliff, Sharon J. 468
Bowman, Max 328, 385
Boyd, Robert E. 470
Casale, Louis A. 93
Char, Donald 395
Ching, George 118, 309
Chun, L. T. 312
Davis, Hugh L. 470
Dickie, E. Gordon 318
Dole, Marjorie 312
Dressman, Gordon 145
Eckstein, Edith G. 385
Eith, David T. 328
Enright, James R. 118
Eveleth, B. M. 223
Fukunaga, Francis H. 106
Gilbert, Fred I., Jr. 106
Gottlieb, Lawrence H. 31
Greenberg, Donald 235
Jacobs, Leon 141
Jim, Robert T. S. 112
Jones, W. P. G. 101
Kagan, Abraham 231
Kessel, John F. 141
Larson, Charles 145
Lau, Edward K. 398, 464
Lee, Richard K. C. 36
Levine, Max 118
Levine, Norman D. 127
Lewis, William P. 141
Limber, Wayne S. 470
Miyasato, Charles 309
Moellering, Robert C., Jr. 231, 235
Netter, Erwin 137
Nomura, Fred M. 387
Paik, Young K. 106
Pang, Richard K. S. 398, 464
Patterson, Pete H. 395
Pinkerton, O. D. 461
Popoff, Frederick E. 323
Rosenblatt, Gerald 235
Schmitt, Robert C. 34
Shaffer, Morris F. 154
Stegmaier, Ann 106
Stokes, Joseph 235
Suh, Inn Soo 154
Sulkin, Edward S. 149
Tabrah, F. L. 223
Tanaka, Kazushi 25
Tanimoto, Ralph H. 309
Trombold, James C. 231
Veltri, Benjamin J. 31
Worth, Robert M. 134
Yokoyama, Mitsuo 106, 328, 385

WILLIAMS MORTUARY

"CHAPEL OF THE CHIMES"

1076 S. Beretania St., Phone 52-587 **Ample Parking Adjoining Mortuary**

OVER A CENTURY OF SERVICE

"Service measured not by gold but by the Golden Rule"

MEMBER

National Selected Morticians, National Funeral Directors Association,
Order of the Golden Rule, Hawaii Funeral Directors Association

This new hypoallergenic formula is like a milk formula in many ways...





Looks, mixes, pours and is accepted like a milk formula

New ProSobee provides a creamy-white hypoallergenic formula that makes the transition from a cow's-milk formula smoother and less troublesome than ever before. ProSobee mixes and pours like milk-based formula, and to all outward appearances seems just like a routine formula. There is no coffee color...no "beany" aroma or flavor...no nipple-clogging coarseness.

ProSobee formula utilizes a unique soy-protein isolate which eliminates all the disturbing physical negatives associated with most soy formulas. A mother's unfavorable reaction to the look and smell of a soybean formula could be easily communicated to a sensitive infant. Milk-like ProSobee formula helps keep feeding time the natural, pleasant experience it should be.

Stool patterns and nutritional values like a milk formula

The stool patterns of infants on ProSobee resemble those of infants on routine milk formulas. There is no offensive odor, no tendency to looseness, no suspicious staining of diapers. Nothing to alarm or disturb the mother...nothing to motivate time-consuming phone calls.

Weight gains obtained with ProSobee formula are comparable to normal gains for infants on cow's-milk formulas. Its protein efficiency value closely approaches that of casein, and is significantly higher than values found in whole soy flour formula. A recent study,* moreover, showed that only ProSobee formula was *devoid of antigenicity,* when compared with two commercially available soybean infant formulas.

*Crawford, L.V., *et al.*: Ann. Allergy *23*:303 (July) 1965.

PROSOBEE IS A TRADEMARK OF MEAD JOHNSON & COMPANY.
©1966, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA.

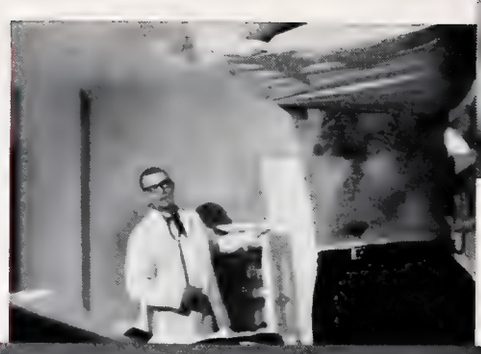
ProSobee®

MILK-FREE FORMULA WITH SOY ISOLATE

Mead Johnson
LABORATORIES

Research for Life

This is the new, everyday penicillin for common bacterial respiratory infections...



10:38 A.M.

10:05 A.M.







10:42 A.M.

...the only low-cost antibiotic bactericidal against all common Gram-positive cocci



11:00 A.M.



11:20 A.M.



11:47 A.M.



12:01 P.M.

Clinical success

Tegopen (sodium cloxacillin monohydrate) assures you a high degree of clinical success against respiratory infections. A recent comprehensive analysis of office patients administered the drug proves the point: *96% of 259 bacterial respiratory infections treated were cured or improved.*[1]

Kills all common respiratory Gram-positive cocci

In contrast to the Gram-positive spectrum of penicillins G and V, Tegopen (sodium cloxacillin monohydrate) destroys strep, pneumo and virtually *all* staphylococci.

Bactericidal in action

Tegopen (sodium cloxacillin monohydrate) is always bactericidal, killing the offending organism. Erythromycin[2] and triacetyloleandomycin[3] are essentially bacteriostatic agents which merely suppress bacterial growth.

Minimal side effects

There is little likelihood of dose-related toxicity with Tegopen (sodium cloxacillin monohydrate).

Low in cost

Even with all of its extra advantages, Tegopen (sodium cloxacillin monohydrate) is priced comparably to penicillins G and V, and 33% less than either erythromycin or triacetyloleandomycin.

BRISTOL THERAPEUTIC SUMMARY: For complete information, consult Official Package Circular. *Indications:* Infections due to streptococci, pneumococci and staphylococci, particularly penicillin G-resistant strains of the latter. *Contraindications:* A history of severe allergic reactions to penicillins. *Precautions:* Typical penicillin-allergic reactions may occur, particularly in hypersensitive persons. Mycotic or bacterial infections may occur. Safety for use in pregnancy is not established. Assess renal, hematopoietic and hepatic function periodically during long-term therapy. *Adverse Reactions:* Nausea, epigastric discomfort, flatulence, diarrhea, eosinophilia, and allergic manifestations. Moderate SGOT elevations have been noted. *Usual Dosage:* Adults: 250 mg. *q.* 6 *h.* Children: 50 mg./Kg./day. Children weighing more than 20 Kg. should be given the adult dose. Treat beta-hemolytic streptococcal infections for at least 10 days. Administer 1 to 2 hours before meals. *References:* 1. Data on file at Bristol Laboratories. 2. Geraci, J.E. (Panel Discussion, M. Finland, Moderator): Antibiot. Ann. 1958–59: 1051, 1959. 3. Thompson, W.T., Jr.: South. M. J. *56*:844 (Aug.) 1963.

BRISTOL LABORATORIES
Division of Bristol-Myers Co., Syracuse, New York

IN TONSILLITIS • PHARYNGITIS • OTITIS MEDIA • SINUSITIS • BRONCHITIS • PNEUMONITIS

1:15 P.M.

new TegoPen®

SODIUM CLOXACILLIN MONOHYDRATE

MEDICAL INDUSTRIES, LTD.

949 McCully Street, Room 11 **Phone 990-396**

ZIMMER

AUSTENAL

HALLMARK

STRYKER

MILTEX

MISDOM-FRANK

Notes and News *continued from 479*

ends with this poignant note: "But then, you don't know. . . ." Having followed his progress closely over those trying weeks, we join with others in thanking God that he made it.

Conservationist and crusader **John Cooper** laments the vanishing prime farmland to such unessential projects as dead storage, golf courses, and housing projects. He feels that these projects "don't need soft earth two feet deep to stand on forever. . . ."

Mild-mannered **David Bassett** described the role of the conscientious objector. He feels that "By taking a nonviolent position, he must be nonviolent in all of his doings. . . . The conscientious objector, like the soldier in uniform, has to make sacrifices. . . . With this privilege goes a lot of responsibility for the rest of his life."

We regret that an anonymous physician perpetrated some recent misconceptions. Uninformed, a physician laid partial blame on the overcrowded general hospital situation for the death of his patient with a heart condition. His patient died at her home after she was unable to get a bed in Honolulu's general hospitals. Perhaps he has never heard of intensive care units which can accommodate critical patients even when the bed situation is critical.

It seems that Lahaina physicians will no longer be at the free beck and call of the County. **William Iaconetti** submitted a $25 bill to the Maui County Police Dept. after being called to declare a drowning victim dead. Bill's argument is, "Lahaina is not being called upon to provide a volunteer police force or a volunteer fire department and there is no reason why medical care should be on a volunteer basis." Sounds reasonable enough.

The following physicians were listed with religious and social leaders as sponsors of a "Hawaii Voters' Pledge Campaign," which will work with a nationwide drive to support candidates who disagree with the Administration's present policy in Viet Nam: **David Bassett, Shepard Ginandes, William Myers, Linus Pauling, Jr.,** and **Robert Worth.** The campaign is part of a nationwide drive by the National Committee for a Sane Nuclear Policy and their intent is "the use of international agencies to settle disputes among nations and for the avoidance of military intervention in the affairs of other nations."

Poison expert **Dick Ho** addressed five hundred ninth graders at Dole Intermediate on poisonings, smoking, glue sniffing, drugs, and poisonous plants. His slides on cancerous lung tissue apparently spoiled a few appetites for lunch, but we feel that it is a far, far better thing that they miss a few lunches than start smoking.

Speaking of public relations, we congratulate **Fred Shepard, Robert Nordyke, Kenneth Momeyer,** and **Max Botticelli** for their lectures to the Lions and Kiwanis clubs.

In a letter to the editor, **A. S. Hartwell,** President of the Hawaii Heart Association, thanked the public for their support: "Your kokua has been a most welcome addition to our campaign and we sincerly hope that you will continue your magnificent support." He pointed out that despite the tremendous strides made in cardiovascular medicine, heart and blood vessel diseases continue to be responsible for one out of every two deaths. This reminds us that we are due for a cholesterol count.

Conference Humor

Extract from a medical conference protocol re a comatose patient who had ingested 42 "red devils" and "yellow jackets" and was being dialyzed. . . . "By 4:15 P.M., just 24 hours after the onset of symptoms, the patient was

continued page 534

AIRKEM

FOR A HEALTHIER ENVIRONMENT THROUGH MODERN CHEMISTRY

The only complete line of quality disinfectants—detergents, insecticides and odor counteractants—sold direct to the consumer by factory trained personnel in the Islands. Call us for a free survey and recommendations in your problem areas.

AIRKEM HAWAII, INC.

B. E. SCOTT, *Mgr.*

1358 No. King St. • Honolulu, Hawaii 96817 • Phone 815-112

CONSIDERING
CONTACT LENSES?

Here's Good News!

Newly perfected Micro thin lenses now provide:

- Shorter fitting time
- Greater comfort
- Reduced period of adjustment to lenses

We continue to offer highest quality and finest service for all your optical requirements.

GUILD OPTICIANS
PTICAL DISPENSERS
of Hawaii, Inc.

Additional location at:

1133 BISHOP ST. 576-570
312 ALA MOANA BLDG. 976-925

**TAXES TOO HIGH?
NEED DEPRECIATION?
NEED INTEREST?**

Real Estate investments are your answer for additional tax deductions — yet increase your assets. For consultation, call or write:

VELVA BERGEVIN
AND ASSOCIATES
Realtors

Phone 936-528
307 Lewers St.—Suite 501
Honolulu, Hawaii



For courtesy demonstrator at your home or office, call 506-211

***On display at* SCHUMAN'S**
1234 South Beretania St.

Doctor's Office Available for Rent

EXCELLENT LOCATION

Attractive office for doctor, parking for doctor and patients. Janitor service. All ready to start practice. Rent 25¢ per sq. ft.

CENTRAL MEDICAL BLDG.
BERETANIA & KALAKAUA

Phone Bldg. Office 979-215
for appointment to see.

Notes and News *continued from 532*

turning his head, swallowing and opening his eyes. By 6:15 P.M., he was conscious and counting fingers. . . ." Well, perhaps he wanted to see how many fingers he had. . . . Another triumph for the artificial kidney. . . .

Place: Queen's death conference. Case in point: A 51-year-old woman with a pelvic mass and high fibrinolysin titer. Differential diagnoses ranged from pancreatic Ca to a dead fetus. **Phil Jones,** our resident-philosopher-diagnostician, supported his dead fetus diagnosis with this profound statement, "I have been told that the only woman who cannot get pregnant is a dead one. . . ."

Howard P. Lewis rambled along on thyrotoxic myopathy. . . . "We admitted this neurotic woman with weakness of her shoulder girdle muscles and a slight widening of her lid margins. After treatment, she returned home, her usual neurotic self, but minus her muscle weakness." . . . Well, we can't win them all. . . .

Gourmet **Morton Berk** explained that in his diabetic screening procedure, he instructs his patients to take a glass of orange juice, eat 2 slices of bacon and 2 pieces of toast with plenty of butter. Visiting Professor of Medicine **Ralph Dolkart** was curious. "What's the butter for?" The reply was prompt and matter of fact, "Toast tastes better with butter." It seems that dumb questions sometimes get bright answers. . . .

Visiting Physicians

Bespectacled, gangling **Howard Lewis,** Professor and Chairman of Medicine at the University of Oregon Medical School, was visiting professor at The Queen's Hospital from April 4 through April 15. Plagued with a postnasal drip and a spasmodic cough, he still managed to enlighten us natives on electrolytes, hypertension, tricuspid lesions, etc. He really brought down the house with his somatotypes as related to diseases. . . .

continued page 536

Boarding
Finest, most modern facilities on the Island—automatic water fountains, etc.

Professional Riding Instruction
The best lesson horses in the state.

Renting
Riding trails.

Camping
Bunk house, Bar-B-Que, swimming pool, dressing rooms.

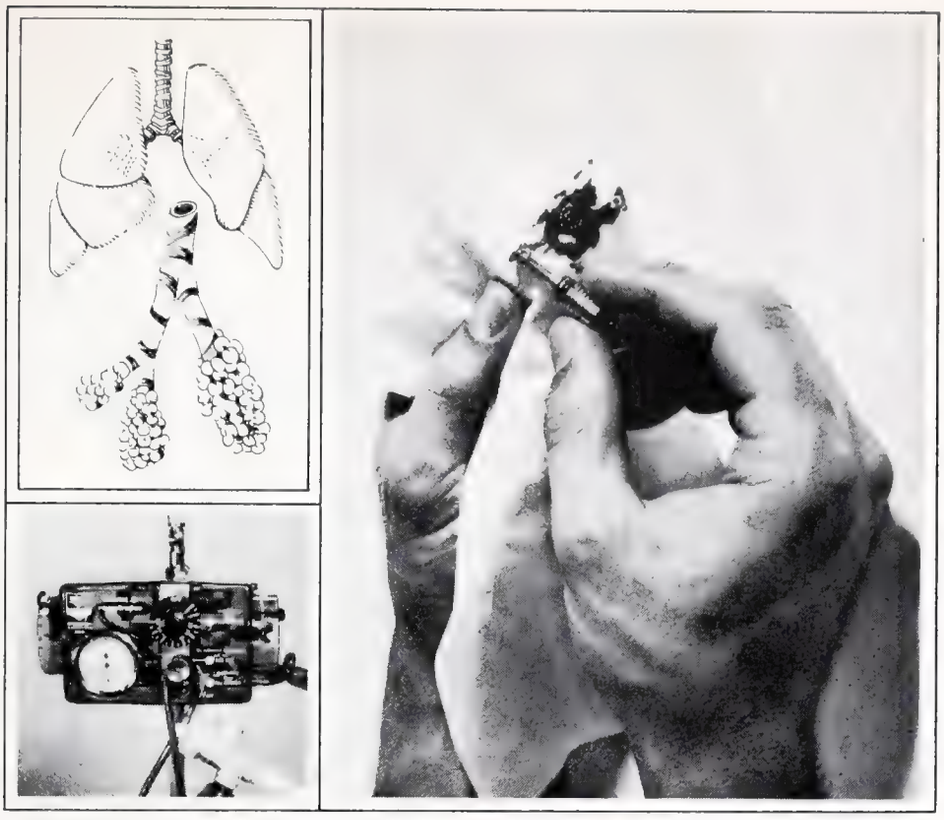


Birthday Parties Picnics Horses Sold Horses Leased

HAWAII HORSE CENTER
RICHARD E. PIGOTT
MANAGER

41-1791 KALANIANAOLE HWY.
WAIMANALO 96795

TELEPHONE
257-288



Critical Respiratory Management, Venturi Tubes and Tar Gard

What does the bedside respirator used in critical respiratory management have in common with TAR GARD? They both benefit from The Venturi Principle:

"A convergent-divergent duct in which the pressure energy of an air stream is converted into kinetic energy by the acceleration through the narrow part of the wasp-waisted passage."

In TAR GARD the accelerated (approx. 200 m.p.h.), tar-filled smoke is stopped abruptly by an impingement barrier. The tars you see in the above unretouched photograph were captured from a single pack of filter cigarettes with a TAR GARD.

And if this picture is worth a thousand words, a live demonstration in your office may well be worth ten thousand words. That's why we'd like to send you a complimentary TAR GARD which normally sells for $2.95.

We'd like you and your patients to see for yourselves that TAR GARD is every bit as effective as the claims made for it in our national advertising.

Simply fill in the coupon and mail it to the TAR GARD COMPANY, 2 Pine Street, San Francisco. We'll be delighted to send you a free TAR GARD with no obligation whatsoever.

After you've seen it used, we think you'll agree that TAR GARD can be important to your patients who continue to smoke.



Tar Gard Company, 2 Pine St., San Francisco, California 94111

☐ Please send me free professional Tar Gard demonstration unit.

☐ Please send me_____doz. regular Tar Gard retail units at special professional price of $10.00 per ½ doz.: minimum order. ($1.67 each—usually retails at $2.95).

☐ Check enclosed. ☐ Please bill me.

Name_____

Type of Practice_____

Address_____

City_____ State_____ Zip_____

TAR GARD. HMJ—1

OCEANSIDE GOLF

on beautiful Kauai

Enjoy uncrowded golfing any day of the week, any week of the year at championship Wailua Golf Course . . . just across the street from your delightful Polynesian accommodations at

Coco Palms Resort



Rates from $17 per day, double
Special group package rates also available

Island Holidays Resorts



Call 931-111 for information and reservations

Notes and News *continued from 534*

Soft spoken, mild mannered and apologetic **Marion S. DeWeese,** Professor and Chairman of the Surgery Department at the University of Missouri School of Medicine, was visiting professor of surgery from April 4 to the 23rd. We remember him from his U. of Michigan days as the same effective lecturer, and his well-attended conferences ranged from ischemic limbs to thermal injuries to diseases of the spleen. . . .

Professional Moves

Apparently since **Sidney Carter's** visit, neurology is suddenly in vogue. We have two brand-new neurologists in town: **Raymond Chock,** located at 1415 Kalakaua Ave., and **Jordan Popper,** at the York International Bldg. We also learned that **Bob Bart,** chief resident at Children's Hospital, has left for a pediatric neurology residency, and that the **Allan Ogiesbys** also left for San Francisco where Allan will do further study in mental retardation. We can almost feel a tension headache developing. . . .

Elected, Appointed and Honored

We congratulate **George Mills** on receiving the A. H. Robins Award as the State's most outstanding physician. No one could be more deserving than this former barefoot boy from the Big Island. . . .

Bob Rigler was elected president of the Oahu Unit of the American Cancer Society and **Harry Arnold** was re-elected a director of the Honolulu Automobile Club. **"Hunky" Chun** (who is modest about his singing) was chosen President of a newly named board of directors for the Honolulu Chorale, which has 84 members, and made a first public appearance in the Fathers' Day Concert by the Sea at the Moana Hotel Banyan Court.

MEDICAL PLACEMENT BUREAU
and
NURSES' REGISTRY

24 Hour Service

LET US SERVE YOU IN YOUR NEED

Nurses, Staff and Office
Nurses, Private Duty
Nurses, Supervisors
Practical Nurses
Nurses, Aide
Dental Assistants
Physical Therapists
X-Ray Technicians
Laboratory Technicians
Medical Stenographers
Medical Clerks
Receptionists
Male Nurses
Bookkeepers
Home Companions

Frieda M. Beezley, R.N., *Director*
Patsy Harrison, *Secretary*

1473 South King St. **991-237**

Your stationery is a reflection of you... be certain the reflection is good!

star-bulletin printing company

the hallmark of fine printing in honolulu





one mid-morning **one mid-evening**

New 300 mg tablet It's made for b.i.d.

For Adults–2 tablets provide a full 24 hours of therapy...with all the extra benefits of DECLOMYCIN...lower mg intake per day...proven potency... 1-2 days' "extra" activity to protect against relapse or secondary infection.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
300 mg FILM COATED TABLETS

Effective in a wide range of everyday infections —respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of discomfort.

Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg of demethylchlortetracycline HCl.

Tablets: film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

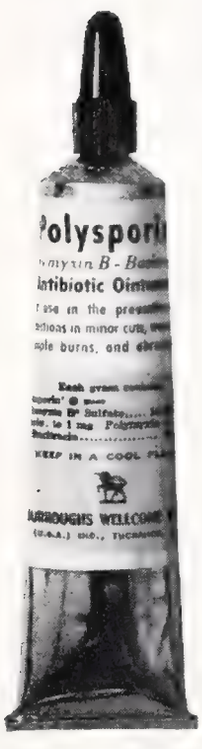
Lederle

674-6—3838

Our "Angels"

	Page
Airkem	532
Amfac	454
Ames Company, Ltd.	539
Ayerst Laboratories	540
Bergevin, Velva	533
Bishop Trust Company	445
Bristol Laboratories	448, 449, 530, 531
Burroughs-Wellcome & Co. (U.S.A.), Inc.	455, 538
Carnation Company	458
Central Medical Building	534
Coca-Cola Bottling Co. of Honolulu	524
Cutest Uniforms	524
Finance Factors, Ltd.	443
Geigy Pharmaceuticals	439
General Diagnostics	525
Hawaii Horse Center	534
Hawaii Medical Service Association	450
Island Holidays	536
Kahanaola	444
Lederle Laboratories, Inc.	537
Lilly, Eli, & Co.	437, 460
Mead-Johnson Co.	528, 529
Medical Industries	532
Medical Placement Bureau	536
Olds, Shirley	441
O'Leary, Lydia	524
Optical Dispensers of Hawaii, Inc.	533
Parke, Davis & Co.	438
Pitman-Moore Company	452, 453
Robins, A. H. Co., Inc.	Insert (between 458, 459), 459
Roche Laboratories	446
Schuman Carriage Co., Ltd.	533
Searle, G. D., & Co.	456, 457
Squibb Company	451
Star-Bulletin Printing Company	536
Syntex Laboratories	Insert (between 446, 447), 447
Tar Gard	535
Williams Mortuary	527

in treating topical infections, no need to sensitize the patient



USE 'POLYSPORIN'® brand
POLYMYXIN B-BACITRACIN
ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
Supplied: In ½ oz. and 1 oz. tubes
Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

THE LIBRARY
UNIVERSITY OF CALIFORNIA
San Francisco Medical Center
THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

7 DAY LOAN

7 DAY

7 DAY
APR 16 1967
RETURNED
APR 10 1967

7 DAY
RETURNED
OCT 2 1967
SEP 27 1967

7 DAY
NOV 14 1967
RETURNED
NOV - 8 1967

DEC 11 1967
RETURNED
DEC - 5 1967

5 DAY
DEC 14 1967
APR 8 1969

RETURNED
APR 11 1969

7 DAY
JUL 22 1969

RETURNED
BY MAIL 7-22-69

RETURNED
JUL 22 1969

10m-12,'66(G8391s4)4315

204145